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Referral Networks in Venture Capital Deal Sourcing

Master's Thesis

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Supervisor and instructor: Mikko Jääskeläinen, Assistant Professor

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ABSTRACT OF THE
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VCs with better networks outperform their peers, get to invest in the most prestigious syndicates, and have more investment opportunities in general. Networks are crucial for many VCs since they can source up to 80% of their deal flow through referrals from their networks. Academia has only covered dyadic relations the referee has and the number of referrals without forming a comprehensive network perspective on referrals. While many VCs rely heavily on referrals, their referral networks are composed very differently, and they are highly curious about how other VCs are managing their referral networks.

The research question for the study is: How is VCs' referral deal flow generated? This question is answered with the help of sub-questions to understand motives for making referrals, motives for choosing a referral recipient, importance of referrals and their share of investments, main characteristics of referral networks, and factors affecting VCs' referral networks. This study is an inductive case study with mostly exploratory focus and some explanatory elements. The basis of the study is a systematic literature review that guided the data collection. The primary data source was eleven semi-structured interviews with VCs from Helsinki and London, and relevant internal documents from their VC firms supported the interviews.

Referees have different motives for making referrals, namely financial incentives, investment syndication, creating future options to invest, and altruistic help with possible future reciprocity. The referee's choice for choosing the referral recipient is affected by VC firm and personal brand, knowledge of VC's focus, how VC treats referrals, the strength of a relationship, VC's encouragement for referrals, and possible vested interest. Referrals account for a significant share of VCs' deal flow, and their share is even higher in investments indicating higher quality compared to other deal flow sources. The main characteristics of referral networks are size and activity of referral network, centrality and roles of connections, and strength of relationships with them. VCs' referral networks are affected by previous work experience, investing and working with companies, explicitly building and maintaining a network, and being reciprocal.

The most notable theoretical contribution of the study is the identification and high-level explanation of referral networks in venture capital. In addition to explaining the referral phenomenon and its importance, the study offers several other managerial implications for VCs including tracking deal flow and referral sources accurately, encouraging referrals from portfolio founders, and treating referrals as well as possible. For founders, the message is simple: get a referral to a VC instead of approaching cold.

Keywords: Venture Capital, Referral, Referral Networks, Network, Deal Sourcing, Deal Flow	Publishing language: English

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Pääomasijoittajat, joilla on parempi verkosto, menestyvät paremmin, pääsevät mukaan kilpailtuihin sijoituksiin ja saavat enemmän sijoitusmahdollisuuksia. Verkostot ovat elintärkeitä pääomasijoittajille, sillä he voivat löytää jopa 80% sijoituksistaan verkoston suosittelemina. Akatemia on tutkinut vain kahdenvälisiä suhteita, joita suosittelijalla on sekä suositteluiden määrää muodostamatta kokonaisvaltaista kuvaa suositteluverkostoista. Monet pääomasijoittajat luottavat paljon suositteluihin, heidän suositteluverkostonsa ovat hyvin erilaisia, ja he ovat erittäin kiinnostuneita siitä, miten muut pääomasijoittajat rakentavat suositteluverkostojaan.

Diplomityön tutkimuskysymyksenä on: Kuinka pääomasijoittajien suositteluista tuleva hankevirta syntyy? Tähän vastataan apukysymysten avulla, jotta ymmärretään motiivit suositteluiden tekemiselle, motiivit suosittelun saajan valinnalle, suositteluiden tärkeys ja osuus sijoituksista, suositteluverkoston pääominaisuudet ja tekijät, jotka vaikuttavat pääomasijoittajien suositteluverkostoihin. Tämä tutkimus on induktiivinen case-tutkimus, jossa on kuvaileva ote, mutta myös selittäviä piirteitä. Tutkimuksen pohjan muodostaa systemaattinen kirjallisuuskatsaus, joka ohjasi aineiston keräystä. Aineiston päälähteenä oli yksitoista puolistrukturoitua haastattelua helsinkiläisille ja lontoolaisille pääomasijoittajille. Haastattelujen tukena käytettiin pääomasijoittajien sisäisiä dokumentteja.

Suosittelijoilla on eri motiiveja suositteluihin: taloudelliset kannustimet, yhteissijoitukset, tulevien sijoitusoptioiden luominen ja epäitsekäs auttaminen mahdollisella tulevalla vastavuoroisuudella. Suosittelun saajan valintaan vaikuttaa pääomasijoittajan henkilökohtainen ja yrityksen brändi, tieto pääomasijoittajan sijoituskriteereistä, pääomasijoittajan käytös suositteluita kohtaan, suhteen vahvuus, pääomasijoittajan aktiivisuus suositteluiden pyytämisessä ja mahdollinen taloudellinen intressi. Suositukset ovat merkittävä osa pääomasijoittajan hankevirrasta, ja niiden osuus sijoituksista on vielä suurempi, mikä viittaa suositusten olevan muita parempi hankevirran lähde. Suositteluverkoston pääominaisuudet ovat koko ja aktiivisuus, kontaktien keskeisyys ja roolit sekä suhteen vahvuus. Pääomasijoittajien suositteluverkostoon vaikuttaa aikaisempi työkokemus, sijoittaminen ja työskentely yritysten kanssa, verkoston rakentaminen ja ylläpitäminen sekä vastavuoroisuus.

Tutkimuksen teoreettinen pääkontribuutio on suositteluverkostojen tunnistaminen ja ylätason selittäminen. Suositteluiden ymmärtämisen lisäksi ohjeet pääomasijoittajille ovat hankevirran tarkka seuraaminen, suositteluiden pyytäminen yrittäjiltä ja suositeltujen yrittäjien hyvä kohtelu. Yrittäjille viesti on yksinkertainen: etsi suosittelu pääomasijoittajalle kylmän yhteydenoton sijaan.

Asiasanat: Pääomasijoittaminen, Suositus, Suositteluverkostot, Verkosto, Hankevirta, Hankevirran Lähde	Julkaisukieli: Englanti

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Janne Korpela

Espoo, 27.5.2019

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Definitions and Abbreviations

Deal sourcing	Deal sourcing means how VCs become aware of new investment opportunities. Deal sourcing can be divided into three main sources: cold contacts, referrals, and outbound. (Tyebjee & Bruno, 1984)
LP	Limited partner (LP) is an investor in a venture capital fund. LPs are not actively managing the VC fund, and a small portion of their investment is allocated as a management fee to the VC firm managing the fund (Sahlman, 1990).
Network	Network is a social structure consisting of actors connected via social interactions and personal relationships (Das, Syiem, & Kalita, 2014).
Referral	Referral means that a mutual connection (referee) introduces two actors to each other. In this thesis, it specifically means that an entrepreneur is introduced to an investor. (Tyebjee & Bruno, 1984)
VC	Venture capitalist (VC) is a person who makes venture capital investments (Wright & Robbie, 1998).
VC firm	VC firm is a firm making venture capital investments (Tyebjee & Bruno, 1984).
VC fund (or just fund)	VC fund is the most common vehicle used by venture capital firms to make venture capital investments. Each VC fund is structured as a separate limited partnership where VCs act as general partners and investors as limited partners allowing a

single VC firm to manage several separate funds simultaneously (Sahlman, 1990). Many of the interviewees use the terms *VC fund* or *fund* when they are referring to a VC firm in general.

Venture capital — Venture capital is a long-term equity investment by professional investors in unlisted, early-stage companies aiming for high growth (Wright & Robbie, 1998).

1 Introduction

1.1 Background

Venture capital firms have been backing some of the world's most successful companies, including Apple, Microsoft, Google, Alibaba, and Facebook (CB Insights, 2019; Sahlman, 1990), making them an essential part of technological innovation. The VCs who get to invest in these companies that become extremely prosperous are determined much by their connections. VCs with more extensive networks enjoy access to more information and to more companies seeking funding, which often sets them apart from VCs with fewer connections.

Existing literature recognizes the importance of networks in the venture capital industry: VCs with better networks significantly outperform their less-networked peers (Hochberg, Ljungqvist, & Lu, 2007), get to invest in the most prestigious syndicates formed for the most wanted deals (Bygrave, 1988; Fund, Pollock, Baker, & Wowak, 2008), and have more investment opportunities in general (Sorenson & Stuart, 2001).

One of the main reasons why networks are so crucial for VCs is the referral deal flow generated from these networks. VC's connections who come across potential companies can refer them to the VC if they fit the VC's scope and investment criteria. This pre-screening makes referral deal flow often better in quality than other sources. Referrals are also a powerful tool to increase the reach of VCs since they help VCs to source quality deal flow far beyond their immediate reach.

Literature has already proved the significance of referrals: they account for 39% to 78% of VCs' deal flow on average (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984) and in the UK, VCs are over 13 times more likely to invest in a company that is referred compared to a company that cold contacted them (British Business Bank, 2019). Additionally, the dyadic ties of referral networks have received some attention in the literature: a stronger tie between referee and VC, a stronger tie between referee and entrepreneur, and higher mutual trust among referee and VC make the referral stronger and investment more likely (Batjargal, 2007). Additionally, the referee's prominence (Maula, 2001; Stuart, Hoang, & Hybels,

1999) and domain expertise (Reuber & Fischer, 2005) also improve the quality of referral and VC's trust towards it making the referral stronger.

The decision of making a referral is usually not made by the receiving VC, and that VC merely receives the referral someone else has decided to make. Because VCs actions do not directly influence this generation of a single referral, there is a risk that VCs take referral networks as a whole for granted or entirely overlook them. However, some VCs put an active effort in building and maintaining referral networks with impressive results while others do not even realize they are missing out on the best deals. VCs have drastically different compositions of referral networks, they are leveraging them differently, and they seem to be highly curious about what the industry best-practices are. Hence, many VCs could benefit from understanding how other VCs build and maintain their referral networks and whether there is something they could also implement in their strategy. This referral phenomenon in venture capital is not well understood in literature, and VCs approach it very differently, presenting a fascinating research gap that has significance for both academia and practitioners.

The existing research only scratches the surface of venture capital referrals by focusing either on the number of referrals or on the dyadic ties the referee has with the entrepreneur or the VC. Paradoxically, academia has proved the importance of referrals without giving sufficient attention to the phenomenon. It is crucial to bring a network perspective on board to understand referrals comprehensively. The referral networks of VCs are not well studied, the motives for making referrals have been ignored (except in syndication literature), and the general process of generating referrals has not been documented in academia yet.

1.2 Research Questions and Objectives

Referral networks in venture capital have not received sufficient attention in academia, even though their importance has been acknowledged. Additionally, VCs have shown interest in understanding how they can better manage their referral networks. To gain a better understanding of the referral phenomenon and to start bridging the identified research gap, the main research question of this thesis is:

Research question: How is VCs' referral deal flow generated?

This research question is approached from multiple directions with several sub-questions. Referrals are, by definition done by someone else than the VC receiving the referral, and that person needs to make an active decision to make the referral. To understand the fundamentals of referrals, it is also essential to identify the motives for making them and also the motives for choosing the recipient:

Sub-question 1: What are the main motives for making referrals?

Sub-question 2: What are the main motives for choosing a particular VC as the referral recipient?

While several studies examine the share of referrals of deal flow, the share of referrals of investments has received almost no attention. It is vital to include the share of investments since it is not well-documented in academia, and it puts the relative quality of referrals in perspective. Both of these are needed to form a comprehensive view of referral networks.

Sub-question 3: How important are referrals for deal sourcing and how large share of investments are made to referred companies?

Referrals are generated by a loose group of people that is not well-understood in academia. Previous studies have put little effort into identifying the main characteristics of VCs' referral networks and describing how they affect the referral network.

Sub-question 4: What are the main characteristics of referral networks, and what are their effects?

Since the venture capital industry is fast-paced and networks determine much of the VC firm's success, it is crucial to understand the dynamic nature of referral networks. Identifying and describing the factors affecting VCs' referral networks is not only relevant for academia, but also both for VCs wishing to step up their game and for VCs who want to maintain their position as the most sought-after source for funding.

Sub-question 5: How do VCs build and maintain their referral networks?

Table 1 below shows the research questions and the corresponding research objectives.

Table 1: Research Questions and Corresponding Objectives

Research Questions	Objective
Research Question: How is VCs' referral deal flow generated?	Form a comprehensive overview of referral networks in venture capital deal sourcing
Sub-question 1: What are the main motives for making referrals?	Characterize the generation of individual referrals
Sub-question 2: What are the main motives for choosing a particular VC as the referral recipient?	Describe the selection of referral recipient
Sub-question 3: How important are referrals for deal sourcing and how large share of investments are made to referred companies?	Relate the scale of referrals to other deal flow sources and the relative quality of referred companies to other companies
Sub-question 4: What are the main characteristics of referral networks, and what are their effects?	Identify the main attributes of referral networks and their effects on referral generation
Sub-question 5: How do VCs build and maintain their referral networks?	Identify the main factors affecting VCs' referral networks including the tools VCs use to build and maintain them

1.3 Methods, Results and Implications

A qualitative approach was chosen for the study due to its applicability to a study aiming to understand a phenomenon and developing a theory from the findings (Flick, 2009). Additionally, a case study was chosen as the research method since it is well suited to answer "how" and "why" questions (Yin, 2003). Previous literature on venture capital referrals was limited and, hence, it was insufficient to provide a theory to be tested. Therefore, an inductive approach was chosen for the study. However, existing studies were able to guide data collection and analysis, and they were used to conduct a systematic literature review. The primary data sources for the study were eleven semi-structured interviews with VCs from Helsinki and London, and relevant internal documents from their VC firms supported these interviews. The data analysis was conducted by using the Gioia method to bring qualitative rigor to the study (Gioia, Corley, & Hamilton, 2013).

The main result of the study is the identification of VCs' referral networks and discovering how referral deal flow is generated from these networks. Referees have different motives for making referrals, namely financial incentives, investment syndication, creating future options to invest, and altruistic help with possible future reciprocity. The referee's choice for choosing a referral recipient is affected by VC firm and personal brand, knowledge of VC's focus, how VC treats referrals, the strength of a relationship, VC's encouragement for referrals, and possible vested interest. Referrals account for a significant share of VCs' deal flow, and their share is even higher in investments indicating their higher quality compared to other deal flow sources. The main characteristics of referral networks are size and activity of referral network, centrality and role of connections, and strength of relationships with the contacts. There are several factors that VCs can leverage to improve their referral networks, which generate the referrals they receive. These factors are previous work experience, investing and working with companies, building and maintaining a network, and being reciprocal. Main tools VCs use to build and maintain networks explicitly are attending and hosting events, having catch-ups with key contacts, creating structured programs for a specific group, and doing ecosystem work.

The main theoretical implication of the study is the identification and high-level explanation of referral networks and their main characteristics in venture capital. These can guide future qualitative studies to explore the referral networks further and provide preliminary hypotheses for quantitative studies. An additional theoretical contribution is the proposal of dynamic relations between the key findings explaining the process of VC referral flow generation. For practitioners, this study gives an overview of what motivates referrals, what are the main characteristics of referral networks, and how VCs build and maintain their referral networks. In addition to explaining the referral phenomenon and its importance, the study encourages VCs to track their deal flow and referral sources accurately so that they can make informed decisions whether to put more effort in their referral networks and if yes, where to improve it. For founders, the message is simple: get a referral to a VC instead of approaching cold.

1.4 Structure of the Thesis

After the introduction chapter, a systematic literature review is presented in three chapters. The second chapter covers venture capital in general. The third chapter focuses on network theory from VCs' perspective, network position of VCs' and how it affects their performance, how VCs transact in a network, and how their network operates in general. The last chapter of the literature review provides an overview of venture capital deal sourcing with an emphasis on referrals. Together these chapters form the theoretical basis of the study.

This theoretical part guides the methodologic choices of the study, which are then presented in the fifth chapter. The sixth chapter presents the findings of the study, which are based on the interviews conducted. This chapter addresses the research questions rigorously based on the interview data. In chapter seven, a process for referral deal flow generation is presented, the findings of the study are discussed in the light of previous research, and theoretical and managerial implications are suggested. Methodology, findings, and discussion form the empirical part of the study. In the end, chapter eight concludes the study and its findings. This structure can be seen in Figure 1 below.

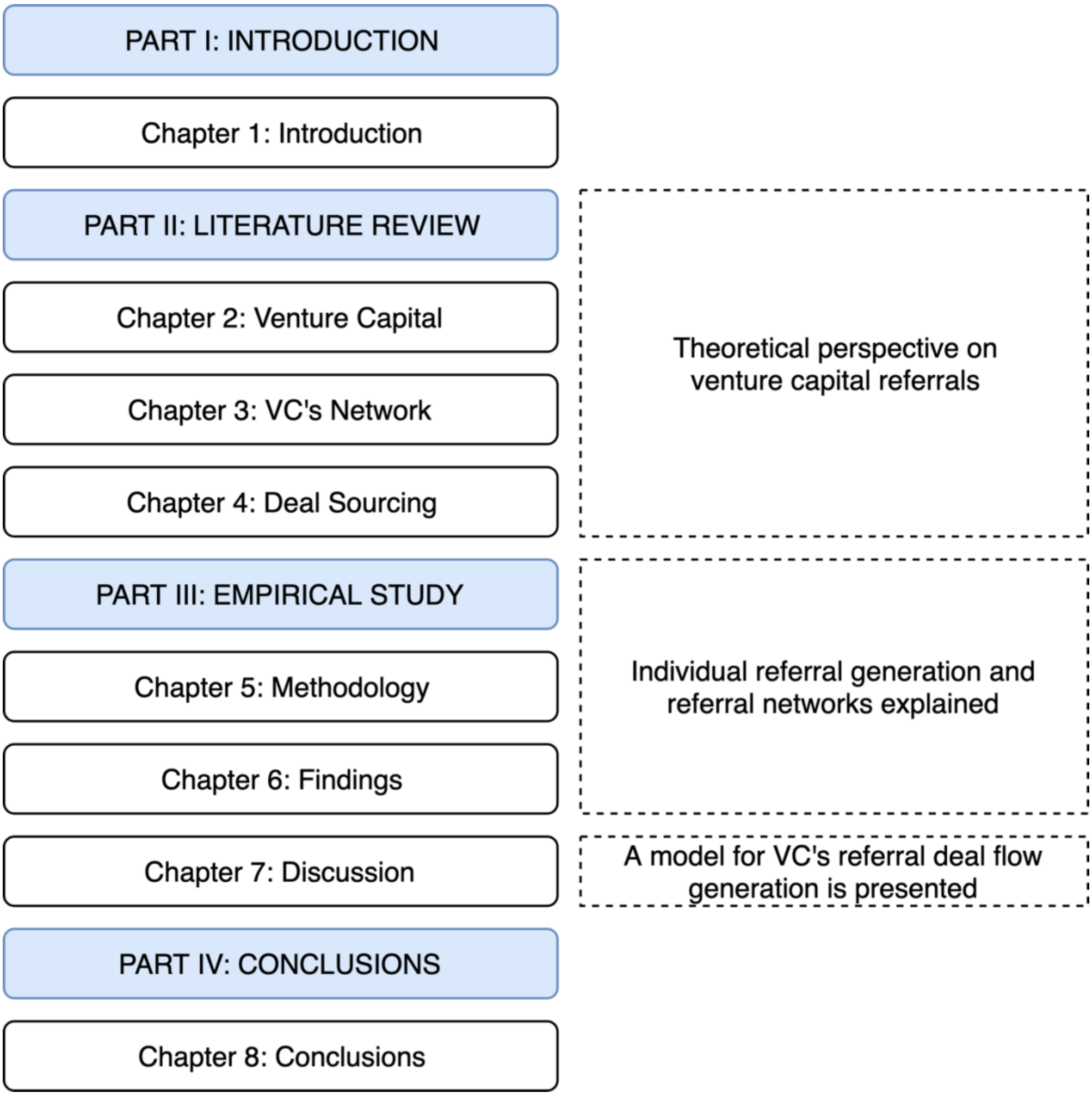

Figure 1: Structure of the Study

2 Venture Capital

2.1 Venture Capital Model

Venture capital funded companies grow faster and are more likely to exit successfully through an IPO or an acquisition compared to traditional companies (Chemmanur, Krishnan, & Nandy, 2011). The venture capital industry has accelerated many wildly successful technology companies, including Apple, Microsoft, Google, Alibaba, and Facebook (CB Insights, 2019; Sahlman, 1990). The venture capital industry needs to be understood on a broader level to understand why venture capital is often an essential part of a growth company's success.

Venture Capital is a long-term equity investment by professional investors in unlisted, early-stage companies aiming for high growth (Wright & Robbie, 1998). These startups often have minimal tangible assets while targeting rapidly changing markets, which makes them very high-risk but also potentially enormously high-rewarding (Gompers & Lerner, 2001). Often the startups that raise venture capital are based on scalable technology, such as software (Metrick & Yasuda, 2010). Due to the inherently high risk, these companies are often unsuitable for public markets (Sorenson & Stuart, 2001). After the investment, VCs usually take a position in the board of directors, give strategic and operational help, and utilize their network by making connections to other investors, customers and potential employees (NVCA, 2018; Sahlman, 1990). The startups have barely any performance history before the investment, the money tied up into the venture capital investment is usually illiquid, and startups often require several rounds of financing before the VC can sell their investment – often in conjunction of IPO or acquisition (Tyebjee & Bruno, 1984).

Stages of venture capital can be divided into seed stage, early-stage, late-stage, and exit. VCs investing in different stages have some differences: earlier-stage VCs put more emphasis on the characteristics of the product and high market growth, while late-stage VCs want to see a proven market fit. Earlier-stage VCs also seek for slightly higher potential returns to compensate for the higher risk, and late-stage VCs tend to spend significantly more time evaluating a company before they invest. In general, earlier-stage VCs rely more on their networks and invest more locally compared to later-stage VCs. Many VCs do not exclusively focus on one stage, but might invest in slightly earlier- and later-stage deals in addition to their preferred stage. (Elango, Fried, Hisrich, & Polonchek, 1995) The investment stages can be seen in Figure 2 below.

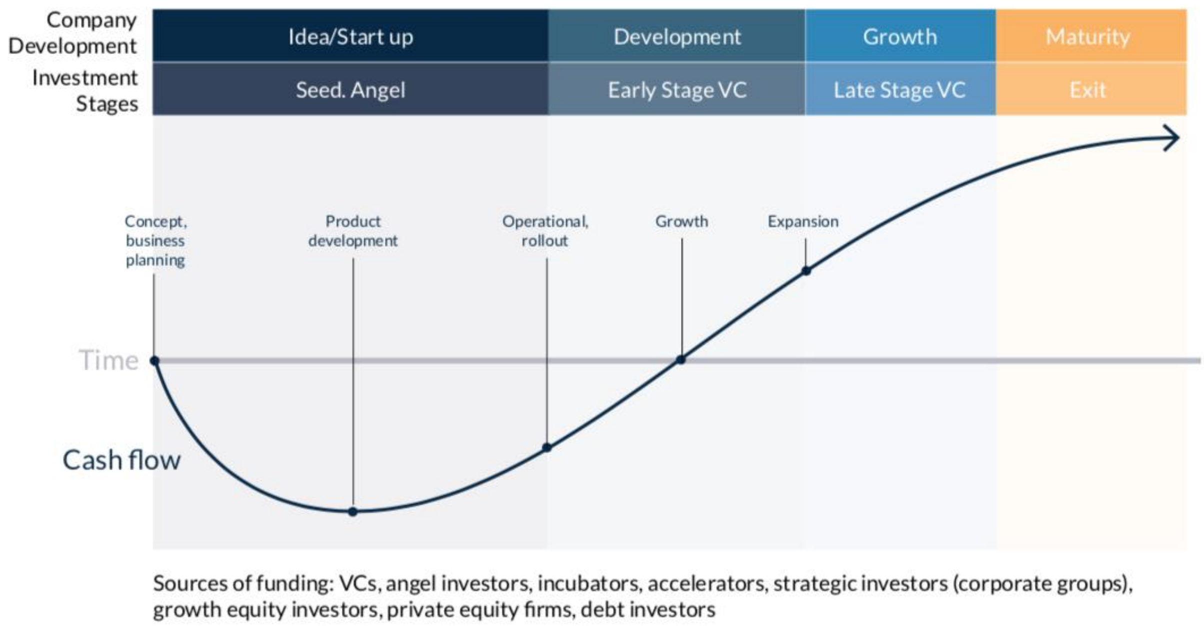

Figure 2: Company and Investment Stages (NVCA 2018).

2.2 VC Fund Structure and Lifecycle

VCs make their investment to companies from venture capital funds. These VC funds are usually structured as limited partnerships with a fixed length in which the venture capital firm is the general partner, and investors of the fund are limited partners (LPs). LPs range from pension funds and endowments to family offices and insurance companies. (NVCA, 2018) In the fund lifecycle, most new investments are made in the first three to five years after which only investments into existing portfolio companies are made. Once the investments are being exited the capital is distributed back to the LPs. VC firm's management fee for the fund is typically around 2-3% yearly with an additional 20% commission (carry) of the realized capital gain. Often VC firms manage several funds at the same time each being a separate limited partnership. These funds can overlap in both investment and distribution periods. (Sahlman, 1990) The structure of a venture capital fund and the different relationships associated with it are illustrated in Figure 3 below.

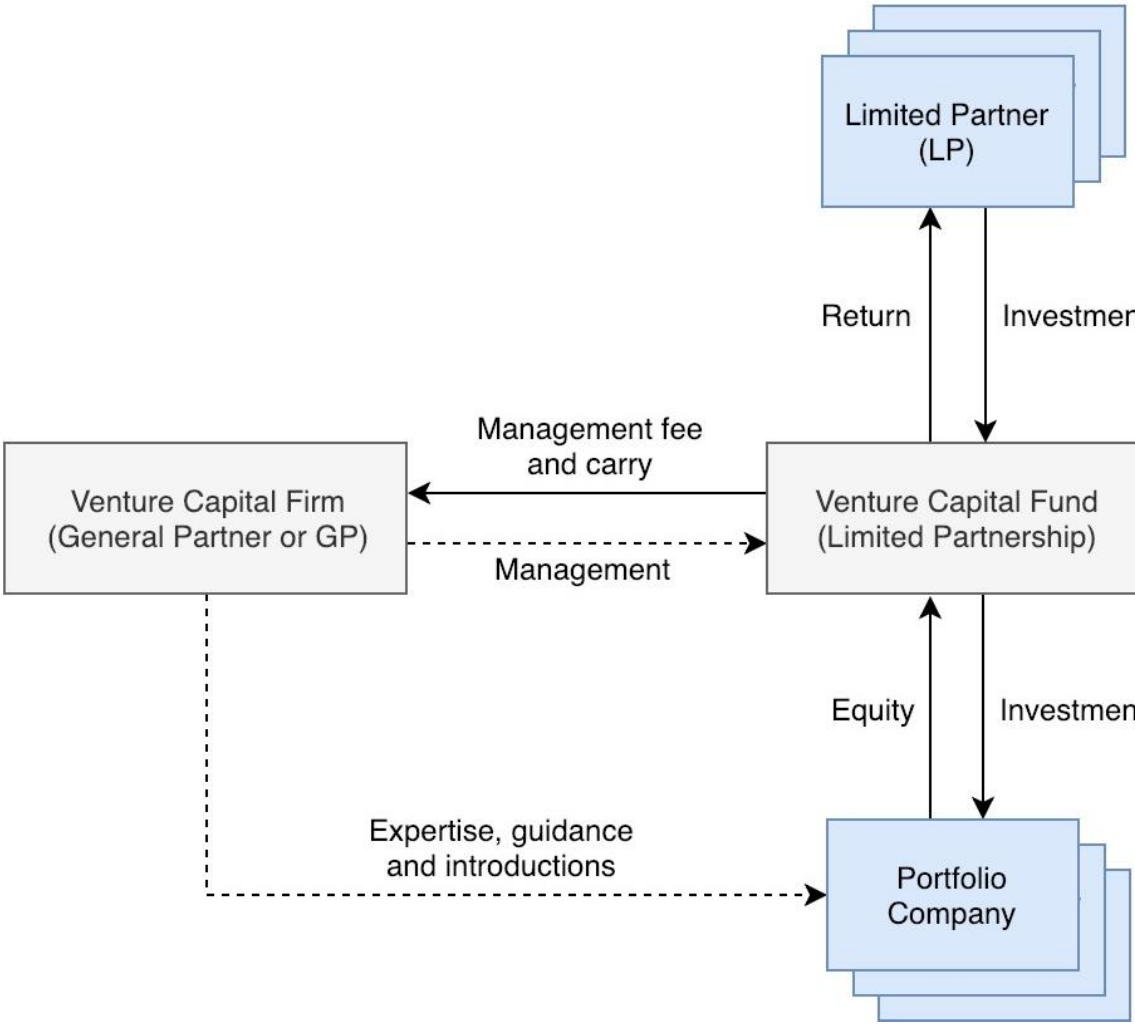

Figure 3: Venture Capital Fund Structure. Based on Sahlman (1990).

A VC fund has a limited lifecycle with five distinct steps that overlap in time. First, to set up a fund, VCs need to raise the capital they can then invest in companies. European VCs raise most of their capital from government agencies (25% of capital), corporate investors (15%), private individuals (14%), and fund of funds (9%). Notably, pension funds, which are a significant contributor to European buyout funds (37% of capital) contribute only 7% of the capital of European VC funds. (Atomico, 2018) Additionally, the general partners of the VC fund also commit a small share, typically around 1% of total capital to the fund (Berlin, 1998). VC fund’s performance and reputation affect how easily they can raise new funds, but also GDP growth, higher general R&D spending, and lower tax rate for capital gains increase investments to VC funds (Gompers & Lerner, 1999).

The second step is deal sourcing in which VCs find potential companies to invest in by three different mechanisms: cold contacting in which the entrepreneur contacts the investor without prior contact, referrals in which a mutual connection introduces the entrepreneur to the investor, and outbound in which the investor finds the entrepreneur by for example attending events or searching databases (Gompers et al., 2016; Tyebjee & Bruno, 1984). Referrals account for 39% to 78% of VCs deal flow on average, cold contacting accounts for 10% to 50% and outbound generates up to 30% of deal flow (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984). The focus of this study is deal sourcing and primarily referrals as a deal flow source. This focus is highlighted with blue in Figure 4 below.

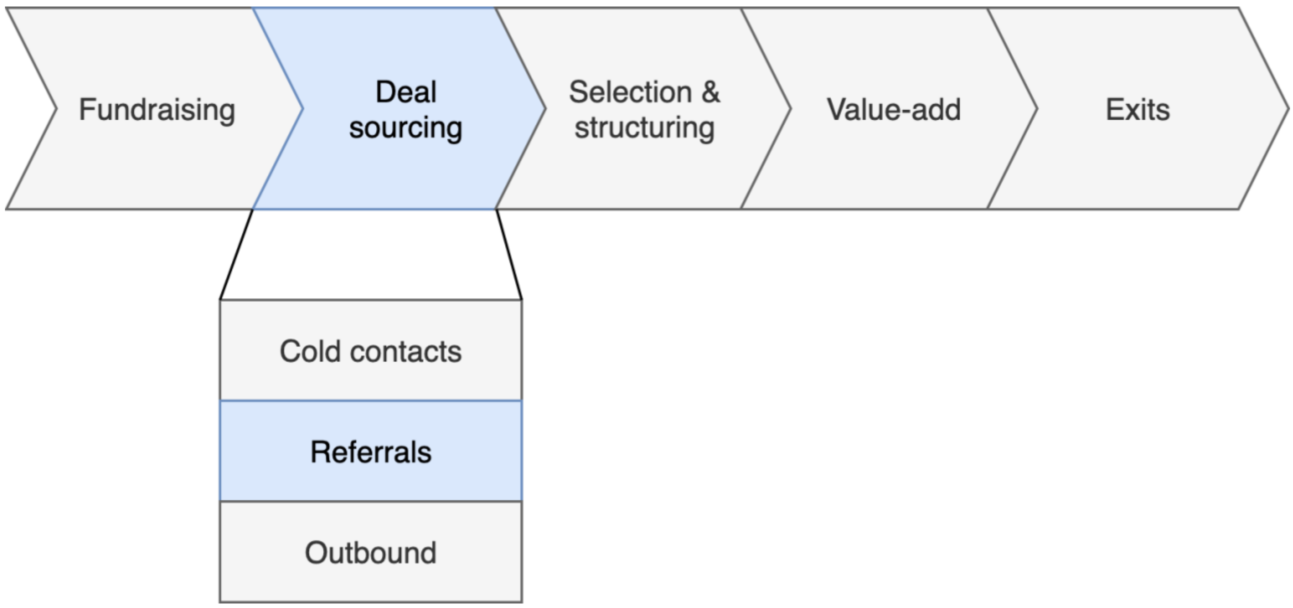

Figure 4: VC Fund Lifecycle with a Highlight on this Study's Focus

The third step, VC fund's investing phase, consists of two separate activities: selection and deal structuring. In selection, the VC firm first screens a larger number of companies based on characteristics such as product, market, and technology. Then the VC evaluates more closely the potential ones based on criteria such as team competence, product, and potential growth. If the VC is willing to invest in the company after the evaluation, they start structuring the deal with the entrepreneur. The investment is made only if the VC and the entrepreneur find a mutually acceptable structure which includes determining terms such as valuation and possible board seats. (Tyebjee & Bruno, 1984) VCs do their deal sourcing and investments in the first three to five years of the fund lifecycle (Sahlman, 1990).

VC’s value-add is the fourth step in the VC fund lifecycle. After an investment is made, a VC can help the company to grow by giving strategic and operational advice, connecting the entrepreneur to relevant stakeholders, and by taking a board seat (NVCA, 2018). The company can also benefit just from being associated with a high-profile VC, which can ease their recruiting and negotiations with suppliers, service providers, and partners (Ferrary, 2003). On average, VCs stay shareholders of the company for approximately five years before exiting (Sahlman, 1990).

At the fifth and last step, the VC sells the shares of their portfolio companies and returns the invested capital and profit to LPs while taking a commission (typically 20%) of the profit (Sahlman, 1990). Exits can happen via five different means. The company can do an IPO, it can be acquired, the VC can sell their shares to another investor (secondary sales), the VC can sell their shares back to the company (buyback), or the VC can do a write-off in case the company is expected to return no or minimal amount of capital (Cumming, Fleming, & Schwienbacher, 2006). After the VC firm returns the money to LPs, they can reinvest it to new funds or other instruments (NVCA, 2018). Often, before the capital is returned to LPs, the VC firm raises a new fund and starts investing it, which means that VC firms often manage several funds simultaneously. Typically the lifecycle of a single VC fund lasts for ten years with a possibility to extend the period for a maximum of three years. (Sahlman, 1990)

2.3 VC Firm Resources

Between fundraising and exits, VCs try to source the most promising deals, select the best ones to invest in, and add as much value as possible after the investment (Tyebjee & Bruno, 1984). How well VCs perform at each of these steps of the VC fund lifecycle is determined by their resources. Bygrave (1987) points out that a VC firm’s primary resources are capital, deal flow, and expertise to manage the investments. Social assets such as brand or status, can also be seen as a VC’s resource, since high status and reputation help VCs to raise new funds (Gompers, 1996) and perform better in general (Bothner, Kim, & Lee, 2006; Jääskeläinen & Milanov, 2011).

These four resources (capital, deal flow, expertise, and social assets) can further be segmented to internal and external. Internal means that VCs possess the resource themselves while external means that VCs can access the resource via their social network. Ferrary (2010) highlights the importance of external resources by arguing that VC's primary competence is the ability to create relevant social capital instead of technical or financial competence. This social capital is tied into relationships that a VC has (Coleman, 1988). Hochberg, Ljungqvist, & Lu (2007) found that better-networked VCs outperform their peers with less central network positions regardless of their performance history, which emphasized the importance of external resources.

Most of the capital VCs invest is raised from limited partners, but the partners typically also commit around 1% of the total funds of the VC firm (Berlin, 1998). Even though most of the funds are raised from external sources, the capital from internal sources acts as a performance incentive which further aligns the interests of VCs and their limited partners. (Fund et al., 2008)

VCs use their expertise in both finding potential investment targets and helping them to grow (Bygrave, 1987). Additionally, VCs often syndicate their investments to leverage the expertise in their social networks to validate investment decisions and to increase expertise and connections available for the investments to maximize their performance (Jääskeläinen, 2012).

Producing high-quality deal flow is essential for a VC to thrive (Gompers et al., 2016). Sorensen (2007) found that experienced VCs had twice as many IPOs than their less experienced peers and two-thirds of this outperformance was explained by sourcing and selecting deals while post-investment activities explained only one-third. VCs can ensure they get good deal flow by improving the three primary deal flow sources. They can be more active to get more outbound deals (Teten, 2014), they can be more visible to get more cold contacts (Yang, 2018), and most importantly they can be better networked to get more referrals (Batjargal, 2007; Ferrary, 2003). Since referred companies account for such a high share of VC investments (over 80% in the UK), it is essential to have a good network that produces good referral deal flow (British Business Bank, 2019).

VCs also benefit from social assets, such as brand and status since they help VCs to raise new funds (Gompers, 1996), get their investment offers accepted and with lower valuations (Hsu, 2004), and perform better in general (Bothner et al., 2006; Jääskeläinen & Milanov, 2011). Connections to high-status players, such as prominent VCs, also enhance VC's social assets since they not only provide additional legitimacy but also more opportunities for future networking (Fund et al., 2008). VCs often use syndication as a way to seek affiliation with highly successful companies (Lerner, 1994) and to connect with prestigious VC firms joining the syndicate investment (Fund et al., 2008).

Figure 5 below shows the resources a VC firm has. Each resource is further segmented to an internal and external resource in two separate columns. The focus of this study, venture capital referrals, is highlighted with blue and can be seen in the figure at the crossroads of *Deal Flow* and *External*. External resources are driven by the VC's network, which is examined more closely in chapter 3, and in chapter 4, the VC's deal flow is investigated.

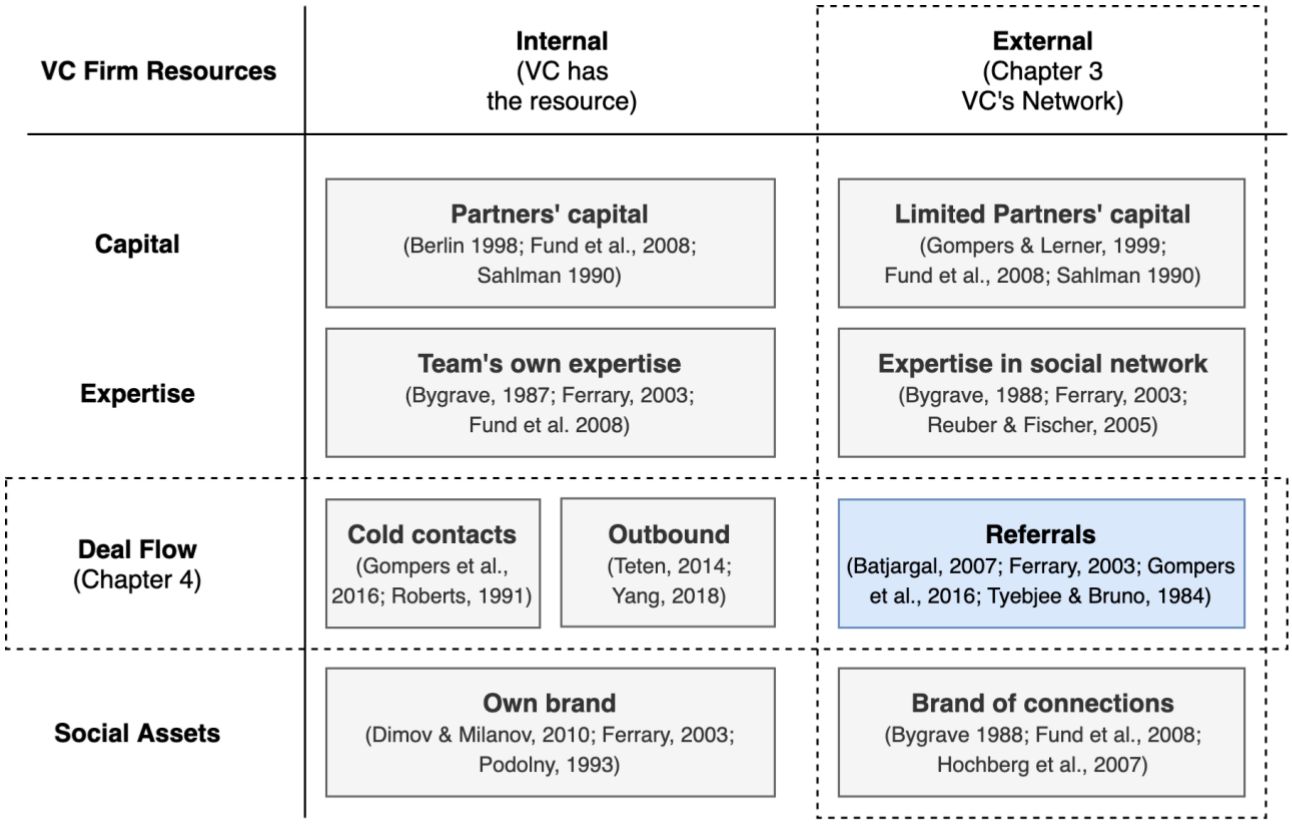

Figure 5: VC Firm Resources

The success of a VC fund is driven more by individual VCs' characteristics instead of the whole firm's characteristics, and also brand, processes, and deal flow are more attached to individual partners than to the firm as an entity (Ewens & Rhodes-Kropf, 2015). Hence, VC firm partners' resources determine much of the VC firm resources. Therefore, partner's networks also determine much of the deal flow the VC firm will get through referrals affecting how well the VC firm will perform in general.

3 VC's Network

3.1 Role of Network for VC's Resources

Much of the VC firm's success is determined by its resources and a significant share of these resources that VCs leverage are not possessed by the VCs but by their networks. Hence, VCs with better networks significantly outperform their less-networked peers regardless of their past performance (Hochberg et al., 2007). Networks are significant since they strongly affect which VC funds invest in the most prestigious syndicates formed for the most wanted deals (Bygrave, 1988; Fund et al., 2008). Also, having a vast network increases the number of investment opportunities a VC has in general (Sorenson & Stuart, 2001).

One key aspect of these networks is social capital, which is a form of capital tied into relationships between and among actors (Coleman, 1988). Ferrary (2010) proposes that VCs' most needed expertise is the ability to create applicable social capital rather than their technical or financial capability. Physical capital is embodied in the material form of tangible assets, and human capital is embodied in the knowledge and skills of an individual. Similarly social capital is embodied in the relations among actors. In addition to physical and human capital, social capital can also increase an actor's or group's productivity. (Coleman, 1988) Hsu (2007) defines social capital as an asset that requires investments to maintain and develop. Human capital, and especially education and prior working experience, can help in building social capital since, for example, universities and workplaces naturally increase an actor's network and social capital (Hsu, 2007).

Social capital has three distinct forms: obligations and expectations enabled by trustworthiness, information channels, and social norms. When an actor does something for another, trusting it will be reciprocated, it creates an expectation for reciprocity in the actor and an obligation to fill it for the other. This expectation could not be possible without trusting that the obligations will be reciprocated. The level of trustworthiness affects social capital and varies between different social networks. Also, actors in the social network have different amounts of outstanding obligations that they can call in at any moment, which affects social capital. The second form of social capital is information channels. Social relations maintained for other reasons can be used to acquire information more efficiently than from other sources. This use can be, for example, obtaining a summary of the latest news or asking for the latest fashion trends from a friend. Social norms and their effective sanctions are the third form of social capital. A notable example of a social norm is to put the group's interest ahead of one's self-interest, which can be reinforced by rewards such as status, honor, and social support. Social norms can be either internalized or strengthened by external rewards and sanctions. This form of social capital is an essential facilitator in the creation of public goods, and like other forms of social capital, it does not only encourage specific actions, but it also restricts others. (Coleman, 1988)

Social capital is tied to the VCs' networks (Coleman, 1988). These networks can be examined on several different levels. Dyadic tie explains the relationship between two actors in a network (Granovetter, 1973), and it can enable various transactions from arm's-length exchange to gift exchange between these actors (Ferrary, 2003). Portfolio of these dyadic ties determine the actor's egocentric network (Ozcan & Eisenhardt, 2009), and a large number of relationships increases the investment opportunities a VC has (Sorenson & Stuart, 2001). The network perspective also includes the structure of the network, actor's centrality, and actor's status in addition to dyadic ties and their number. Actors whose relationships span structural holes between different network clusters can control information flow giving them a competitive advantage (Burt, 2001), actors with more central positions in their networks have access to more information (Gulati, 1998), and high-status VCs perform better in general (Bothner et al., 2006; Jääskeläinen & Milanov, 2011).

3.2 Dyadic Ties

VC's network can be examined on three levels: dyadic, portfolio, and network level. The fundamental elements of networks are dyadic ties between two actors. The strength of a dyadic tie according to Granovetter (1973) is "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie." A strong tie between actors increases their willingness to cooperate, lowers the risk of opportunistic behavior, and enables the transferring of tacit information (Fliaster & Spiess, 2008). In the venture capital context referrals benefit from stronger relationships, since a stronger tie between referee and VC, as well as a stronger tie between referee and entrepreneur, make a referral stronger and investment more likely (Batjargal, 2007).

Weak ties, however, are also significant for VCs. Actors A and B have most overlap in their networks when they have a strong tie between each other, and least overlap when the tie connecting them is weak. This overlap leads to a result that the least likely triad to exists in networks is one where there exist strong ties between actors A-B and A-C but no to tie between actors B-C. Hence, weak dyadic ties are the first bridge between different actors and clusters who do not typically interact with each other, providing access to new information. Also, information and connections spreading through a network can reach more people and longer social distance while spreading through weak ties instead of strong ones. (Granovetter, 1973) Besides acting as a channel to non-redundant information, weak ties also enable the efficient transfer of precise information (Fliaster & Spiess, 2008).

In addition to the strength of dyadic ties, the transactions made through dyadic ties also have different characteristics. These transactions of economic goods can be explained by three separate mechanisms: arm's-length transaction which is dominant in markets, power relationship which is dominant in organizations, and gift exchange which is dominant in networks (Ferrary, 2003). Ideal arm's-length relationships are motivated by self-interested profit-seeking, and exchange in transactions is limited to information on price and quality of goods since that is everything needed for efficient decision-making. Ambiguity is minimized by standardization of goods or by enforceable contracts while social relationships do not affect the rational economic behavior in arm's-length relationships. (Uzzi, 1996) However, several studies have criticized this model since economic actors show embeddedness in which social relationships affect economic activity (Granovetter, 1985; Uzzi, 1996), transactions also include implicit contracts in addition to explicit ones (Hart & Holmstrom, 1986), past transactions create trust between firms (Gulati, 1995), and in repeated games the anticipated future actions affect decisions (Kreps, 1990).

Arm's-length relationships can explain only a small portion of the transactions done by VCs in Silicon Valley. A vast amount of information is communicated in casual interactions without a formal contract nor direct financial reward. As an example, a VC can gather information about a company's technology by contacting his technical acquaintances or validate the team by contacting his contacts who have worked with them. This way, the VC will get private information to guide decision-making without monetary compensation and hence, not through an arm's-length relationship. The key here is that the VC has an existing relationship with the person reached out to. (Ferrary, 2003) Not all transactions can be done in market conditions with an explicit contract and a corresponding counter-payment since some transactions require trust that takes time to develop, and selling some information is prohibited by convention or by law (Uzzi, 1996).

In power relationships, one party has power over another and can force the other to an exchange to which the other party would not otherwise agree. Hence, a power relationship is asymmetric and has a negative sum. The weaker party continuously tries to end the power relationship, which makes them unstable and short. (Ferrary, 2003) Especially inside organizations, the power relationship is typical and is often allowed by hierarchy and specific roles (Pfeffer, 1992). Ferrary (2003) points out that in Silicon Valley economic actors exploiting power relationships will harm their reputation and face isolation from others while acknowledging that, for example, Microsoft's monopolistic position has forced smaller players to sell their technology to it. The same problem can, for example, rise in large venture capital funding rounds where the lack of competitors to SoftBank creates a power position for it: if money from SoftBank is not accepted this will directly give space to competitors in the same industry (Ghorpade, 2018). However, in general, the variety of players prevents the rise of a monopoly in Silicon Valley, but still, certain VCs prefer to work with certain lawyers and certain investment banks which creates a network of first-tier players which consists of players with complementary resources and is not open for outsiders (Ferrary, 2003).

Gift exchange explains the non-economic exchanges while still acknowledging the economic ones. In socialized exchanges, the networks have not only economic but also psychological and sociological functions. In addition to the above-mentioned arm's-length relationship, which can be explained without socialization, three other exchanges require a level of socialization. The lowest level of socialization is required for socially determined arm's-length exchange. This exchange is otherwise close to the pure arm's-length exchange, but it is initiated by the social networks of buyers and sellers which help them to get in touch in the first place. A higher level of socialization is required for gift/counter-gift of economic goods in which social networks are also utilized to initiate the discussions. However, in gift exchange there is no explicit contract between the actors; it allows the transaction of information which is not possible to sell; the gift will be compensated by an economic good, not a financial reward; and the compensation is not instantaneous nor defined when the exchange is made. Gift/counter-gift exchange can also be done with non-economic goods, which defines the fourth type of exchange. These non-economic goods satisfy non-economic aspirations, namely social and psychological needs. (Ferrary, 2003)

Ferrary (2003) argues that the most steady and efficient type of exchange is gift exchange when the parties are independent entities but economically dependent upon each other. However, these different types of exchanges, economic and non-economic, can coexist in which case the exchange is called socially embedded. In social networks, the pure arm's-length relationship fails to explain the vast range of interactions, and all these four exchanges are at play. One type of exchange can spark another type of exchange, and the arm's-length exchange is not mutually exclusive with a gift exchange. An exchange can also include a symbolic compensation: when for example a high-profile VC reaches out and asks for information, the person can brag about helping that VC in addition to asking for a counter-gift later in time. (Ferrary, 2003) In general, having both embedded and arm's-length relationships provides the optimal performance compared to having only one type of relationship (Uzzi, 1997).

A precondition for an exchange is that a person holds a resource that the other one desires and is willing to give compensation for. If a person wants to enter a network, and he possesses a needed resource, he needs to make a gift of it to initiate a long-lasting relationship. All gifts will accumulate informal credit for the giver that can be reciprocated by a counter-gift, so the gift is never actually free. Hence, if a counter-gift is eventually not made, the relationship will be stopped. The receiver can also decline the first gift, which sends a strong signal of willingness not to cooperate, and it also frees the receiver from the responsibility of a counter-gift stopping the exchange outright. As an example, an associate from a second-tier VC firm invited a first-tier VC firm Sequoia Capital to invest in their portfolio company just before its stock listing giving a possibility for a quick profit for Sequoia instead of keeping all the profit to his own VC fund. This first gift sparked a long-lasting relationship between the VCs. The first gift can also be asked for if the asker possesses desirable resources, such as when a VC asks an unfamiliar headhunter for free information of an entrepreneur. If the headhunter then provides this initial gift of information, this creates the anticipation of a counter-gift from the VC in the future. (Ferrary, 2003) This expected reciprocity initiated by gift exchange can be seen as a form of social capital, which is enabled by mutual trust (Coleman, 1988).

VCs socialize many of the economic transactions they are involved in unless the socialization is not feasible, such as in acquiring commoditized goods like newspapers or airline tickets. With economic actors that the VC interacts with frequently the economic relation is often socialized. VCs host skiing trips, casual dinners, and other social gatherings where they invite entrepreneurs and other stakeholders with the goal of getting information and strengthening their social ties. This socialization leads to anticipated reciprocity, and the failure to provide a counter-gift will have not only economic but also symbolic consequences of being excluded from the network. Not providing a counter-gift can give short-term benefits in loose social networks where new economic actors can be easily be found and information flow is not perfect but in dense social networks failure to render a gift will harm the reputation of the person affecting its behavior with all other economic actors. (Ferrary, 2003) Failing to obey the social norms (a form of social capital) set by the group can lead to a collective sanction which strengthens the consequences of possible misconduct (Coleman, 1988).

The socialization blurs the line between private and professional networks such as gift exchange blurs the line between non-economic and economic transactions. Declining to enter a personal relationship will automatically exclude the person from social networks and informal information flow. In general, if the parties are not in the same social network nor economically interdependent, they are more likely to enter into power or arm's-length relationship. (Ferrary, 2003) The socialization of economic transactions creates embedded relationships which have several benefits. First, trust allows the transaction of goods that are necessary for high efficiency but are hard to transact in arm's-length relationships. Second, more informal and proprietary information is exchanged, which increases learning and makes the organization more adaptive. Third, the parties can solve problems together rapidly, which increases feedback from customers and facilitates the creation of new solutions. (Uzzi, 1996) While social ties and the network of these ties are often prerequisites for trust (which sets embedded relationships apart from arm's-length ones), this trust can also create an opportunity for wrongdoing not possible in arms'-length relationships (Granovetter, 1985).

3.3 Portfolio of Ties

The second level in examining a network is the portfolio level. Actors have a multitude of dyadic ties forming a portfolio of ties, also known as the egocentric network (Ozcan & Eisenhardt, 2009). Having a large number of ties increases the number of investment opportunities the VC has (Sorenson & Stuart, 2001), and improves the performance of the VC firm in general (Hochberg et al., 2007). Hence, a high number of relevant ties is a critical characteristic of a well-functioning network. In addition to the number of ties, also the quality and mix of ties are essential.

Having a mix of both strong and weak ties positively affects firm performance (Rowley, Behrens, & Krackhardt, 2000). Strong ties have several distinct benefits that affect actors' behavior: high willingness to collaborate, a lower risk of opportunistic behavior, the possibility for reciprocity, and the ability to transfer complex and tacit knowledge. On the other hand, weak ties allow a smooth transfer of explicit knowledge, access to non-redundant information, and lower switching costs to other actors. (Fliaster & Spiess, 2008)

Also, mixing both embedded and arm's-length ties improve firm performance (Uzzi, 1997). In arm's-length transactions, standardization of goods minimized ambiguity, and social relationships do not affect the rational economic behavior (Uzzi, 1996). Having arm's-length relationships in addition to only embedded ones ensures the flow of new information to the network, helps to avoid excessive feelings of obligation between actors and can help to stay clear of a vicious circle of revenge (Uzzi, 1997). In general, arm's-length transactions are superior in tasks that require calculative risks and market competition, while embedded ties are superior in tasks that require trust and collaboration (Uzzi, 1997). Embedded relationships allow VCs to gather information from their social networks regarding possible investments, which support the quick decision-making VCs aim for (Ferrary, 2003). This information can be informal information that traditional markets fail to provide (Granovetter, 1985). Embedded tied also enable higher mutual trust and ad-hoc problem solving, which in turn make the relationship and network more efficient (Uzzi, 1996). Hence, not being part of a social network with embedded ties will give a person an economic disadvantage (Ferrary, 2003).

Additionally, the focal actor benefits from having ties to a diverse set of actors (Baum, Calabrese, & Silverman, 2000), having ties to prominent actors (Stuart et al., 1999) and having ties to actors with complementary resources (Rothaermel, 2001).

Having an extensive portfolio of ties does not provide only benefits, but it also creates costs for the actor. Building and maintaining stronger ties require more resources compared to weak ones. However, the transaction costs are likely lower when transacting with close acquaintances since actors who know each other already (1) spend less time on searching a suitable actor, (2) reach an agreement for more quickly, (3) can communicate more effectively, and (4) require less supervision for opportunistic behavior (Fliaster & Spiess, 2008). However, strong ties do not always minimize transaction costs. Fliaster & Spiess (2008) argues that low specificity of knowledge, low strategic relevance of knowledge, low uncertainty, and low transaction frequency make weak ties more cost-effective for knowledge mobilization. If the same attributes are high, then strong ties will minimize transaction costs (Fliaster & Spiess, 2008).

Since there is a cost of maintaining a tie, this sets a limit for the total number of ties an actor can, and should, aim to build and maintain (Fliaster & Spiess, 2008). Which ties are most valuable for VCs is affected by not only the strength and embeddedness of the ties but also by the structure of the network, centrality of the actors, and their status.

3.4 Network of Ties

3.4.1 Structure of a Network

To understand networks comprehensively, a network level of examination is essential in addition to a dyadic and portfolio level. On the network level, the structure of a network, network centrality, and status and reputation in a network all affect the actor's network and opportunities available. The structure of a network is determined by the relationships the actor's connections, and their connections, have.

Weak connections between clusters in a network are also called structural holes. Actors whose relationships span these structural holes have a competitive advantage since they can control information flow and projects between opposite sides of the hole. Structural holes are separating non-redundant information sources, and hence an actor bridging these separate clusters reaches more information than other actors inside the clusters with a similar number of connections. The actor at the crossroads of social groups can also introduce actors who would otherwise be disconnected, giving this actor an additional power. Hence, structural holes in actors' networks increase their social capital by allowing access to more information and giving more control over information and project flow between separate clusters. (Burt, 2001)

Heuven & Groen (2012) found that entrepreneurs who have a positional network rich in structural holes have an advantage in identifying opportunities for financing. Relational network with many weak ties further benefits this identification, and experienced entrepreneurs who seek direct access to financial resource providers (such as VCs) should aim to have a network rich in structural holes with many weak ties. On the other hand, relation network with many strong ties is more effective when an entrepreneur seeks for a referral to financial resource providers since a stronger tie between an entrepreneur and the referee increases the effectiveness of the referral. Hence, for effective referrals, the optimal network would also be rich in structural holes but would have many strong ties instead of weak ones. (Heuven & Groen, 2012)

All relations in social networks contain some forms of social capital, but the closure of social networks is particularly important for some types of social capital. Closure of social networks means that if an actor A is connected to actors B and C, then B and C are also connected either directly or via another actor. This closure is an essential but not sufficient prerequisite for the development of social norms. The closure is also needed for trustworthiness that facilitates obligations and expectations, since in a structure without closure reputation cannot develop, and collective sanctions cannot be employed. (Coleman, 1988) Burt (2001) explains that closure of social network removes the structural holes within a team, improving both coordination and communication inside the team. He also argues that maximum group performance is achieved by having both high network closure within the group and by having many structural holes beyond the group boundaries increasing the number of non-redundant contacts (Burt, 2001).

3.4.2 Network Centrality

An actor's centrality in a network affects the value of that network profoundly. Organizations that have more central positions in their networks have access to more information (Gulati, 1998), view their networks more accurately (Krackhardt, 1990), and have knowledge of and access to a broader range of potential partners (Gulati & Gargiulo, 1999). Traditionally, organizational relationships have been seen as a means to access resources and to control uncertainty (Selznick, 1948), and the decision to form relationships has been driven by these exogenous constraints (Gulati & Gargiulo, 1999). Lately, also endogenous constraints, especially the actor's centrality in their network, have been identified to affect the organization's ability to embed within existing networks (Gulati & Gargiulo, 1999). In this view, the primary social constraint is the network in which the actor operates, and when organizations operate in this network where they are embedded, their actions also change the features of the network (Koka, Madhavan, & Prescott, 2006). Hence, organizations are most likely to form relationships with organizations they have done business with earlier or with partners of their existing partners (Gulati, 1995). This view suggests that actors with central positions tend to form relationships with actors holding at least as central positions instead of peripheral players, and peripheral organizations are also more likely to form relationships with central than peripheral organizations (Gulati & Gargiulo, 1999). Chung, Singh, & Lee (2000) agree that organizations with complementary skills and prior direct or indirect ties are more likely to form relationships. They also argue slightly differently than Gulati & Gargiulo (1999) that similar status (instead of centrality) increases the likelihood of partnerships, but they did not compare the likelihood of a peripheral-peripheral relationship to a peripheral-central one (Chung et al., 2000).

Network centrality can be defined as either structural or cognitive centrality. Structural centrality measures the number of ties an actor has with others in a network (Wasserman & Faust, 1999, p. 178). Cognitive centrality measures how much information an actor shares with others in a network (Kameda, Ohtsubo, & Takezawa, 1997). A cognitively central actor is often seen as a trustworthy information source in a network, and they tend to acquire significant power and influence compared to more peripheral actors (Kameda et al., 1997). Fund, Pollock, Baker, & Wowak (2008) argue that new actors are likely first to obtain cognitive centrality which subsequently leads to structural centrality, and afterward, both centralities can increase each other in a virtuous circle.

3.4.3 Status and Reputation in a Network

Status and reputation of a VC firm affect its position in a network and options that are available for it (Dimov & Milanov, 2010; Ferrary, 2003; Podolny, 1993). Reputation is determined by VC's activities and the performance of its investments while status is more the perceived quality of a VC driven by affiliations and relationships that a VC has (Dimov & Milanov, 2010). High status and reputation help VCs to form syndications for investments (Dimov & Milanov, 2010), raise new funds (Gompers, 1996), get their investment offers accepted (Hsu, 2004), negotiate lower valuations for their investments (Hsu, 2004), and perform better in general (Bothner et al., 2006; Jääskeläinen & Milanov, 2011).

Ferrary (2003) points out that the VCs with the highest status see the most promising deals, can raise the largest funds and have access to decision-makers that are willing to cooperate with them. This privilege means that VCs with lower status will fund companies turned away by their more prestigious peers (Ferrary, 2003). Investments of more experienced VCs perform better, and this performance is caused by not only the higher value added by experienced VCs but also by sorting, which means that experienced VCs invest in better startups than inexperienced ones (Sorensen, 2007). Hochberg, Ljungqvist, & Lu (2007) argue that network effects explain much of this performance improvement of experienced VCs instead of experience itself. The network position of VCs not only helps them to access the most prominent cases but it can also be the very reason why a company wants to raise funding from a particular VC – the company wants access to the VC's network (Ferrary, 2003). The reason for this is that VCs help to coordinate other stakeholders for the new company, such as lawyers, industry connections, recruiters, and investment banks since the entrepreneur often lacks the experience and knowledge needed (Ferrary, 2003). The prestige of a high-profile VC on board will also directly help the company with recruiting talent and getting suppliers, service providers, and possible partners (Ferrary, 2003).

The status and reputation of VC's connections also affect the VC's network. Ties to prestigious players, such as prominent VCs, not only provide additional legitimacy but also more opportunities for future networking for the VC (Fund et al., 2008). VCs use, for example, syndicated investments to seek affiliation with highly successful companies (Lerner, 1994) and to form connections to high-status VC firms participating in the syndicate (Fund et al., 2008).

3.5 Network Development

Networks are not static, and VCs can put effort into developing their networks. Bygrave (1988) argues that a VC firm's joint investments with other VC firms determine much of their network with other VCs. Sorenson & Stuart (2001) noted that each new investment extends a VC's network by adding new contacts. Top VC firms investing in high innovation form a tightly coupled network, and of that network, the VC firms located in a central venture capital hub (California in Bygrave's study) are especially tightly connected (Bygrave, 1988). Fiet (1995) adds that the relationships among VCs are based on trust and that these relationships are created not only by investing together but also by mingling in meetings and events. Part of VCs' network is often built through existing social links, such as having studied in the same university, worked at the same company, or coming from the same ethnic background (Ferrary, 2003).

Connections to other VC firms are essential for both deal sourcing, and information gathering purposes and connections, especially to VC firms with a central position are valuable. Information flows swiftly in a tightly coupled network, but it has redundancy and sameness since the same information reaches a VC from several directions. (Bygrave, 1988) VCs often share business plans they receive from entrepreneurs within their networks (Bygrave, 1988; Fiet, 1995; Sorenson & Stuart, 2001). Hence, entrepreneurs should approach a few most suitable VCs instead of approaching a large number of VCs simultaneously (Bygrave, 1988).

VCs should aim to have a high number of connections to other relevant actors in addition to other VCs to ensure access to rapid information flow (Bygrave, 1988). VCs can leverage these social networks to validate an entrepreneur and their company by gathering knowledge. This information gathering requires socially embedded relationships due to the tacit nature of the knowledge acquired, which includes information on the entrepreneur, the technology used, and the potential market. (Ferrary, 2010) Since VCs evaluate up to a thousand proposals per year, this offers them a significant opportunity to establish relationships and improve their network while asking for advice and collaborating not only with other VCs but also with other professionals. As expected, VCs' trust towards their informants increases as they gain experience collaborating with them. (Fiet, 1995)

Networks generating investment opportunities affect the geographical and industry distribution of investments since networks tend to cluster both regionally and socially (Sorenson & Stuart, 2001). Strong networks among VCs in a region reduces the likelihood of a new VC entering the market since local players have strong syndication networks and they can strategically punish incumbents who collaborate with newcomers (Hochberg, Ljungqvist, & Lu, 2010). This entry threshold can be overcome by sharing deal flow with the incumbents in other regions and, hence creating reciprocity by initiating gift exchange (Hochberg et al., 2010). In general, VCs with a more central position in co-investment networks are more able to invest outside their local geography (Sorenson & Stuart, 2001). Also, having specific experience in the specific region or industry helps to smoothen the entry to a new region (Hochberg et al., 2010).

VCs with better network positions perform better than VCs on the outskirts of social networks (Hochberg et al., 2007). Hence, rational VCs should have a strategic objective to improve (or maintain) their network position. Central players can maintain their position by tapping into additional resources by forming new valuable relationships and by letting go of old, less valuable relationships (Gulati & Gargiulo, 1999). To improve their network centrality, VCs should focus on their portfolio companies: both successful exits and the ability to recruit a new VC to lead the next funding round help VCs to become more wanted for future syndications. Also, by inviting other investors into its syndicates, a VC will generate future co-investment options. (Hochberg et al., 2007)

Fund et al. (2008) summarize four key drivers to develop network centrality of VC firms: (1) founders' social capital and status; (2) the resource endowments the VC firm can acquire; (3) VC firm's prestigious affiliations with other prestigious actors; and (4) VC firm's visibility-enhancing performance. Each of the drivers affects the other drivers. Founders' social capital can help to form prestigious affiliations and raise capital. More resources give the VC firm more options to pursue, which leads to improved ability to form relationships with first-tier players and to achieve visibility-enhancing performance such as IPOs. High performance helps to raise capital and increases the likelihood of investing with first-tier VC firms. The founder’s time urgency and effort put into improving and leveraging these four key drivers determine the speed of achieving network centrality. (Fund et al., 2008)

4 Deal Sourcing

4.1 Deal Flow Process

Gompers et al. (2016) point out that generating proprietary deal flow is a significant factor in the success of a VC firm. In Sorensen's (2007) study most experienced investors' achieved almost twice as high IPO rates compared to inexperienced investors, and two-thirds of this performance difference was explained by deal sourcing and selection while the value-add of investors only explains one-third. Sorensen did not separate deal sourcing and selection. High-status VCs attract the most potential companies, while their low-status peers fund the companies rejected by the more prestigious VCs (Ferrary, 2003). So, how does the deal flow of VCs work?

The deal flow funnel of VCs can be divided into five steps: deal sourcing, screening, evaluation, deal structuring, and post-investment activities. Deal sourcing means the process of how VCs identify potential investment targets. Deal sourcing can be further divided into cold calling, referrals, and outbound, which are elaborated below. Screening means the initial filtering of potential deals, and it can be done based on investment round size, the technology used, market or industry targeted or geographic location. If the company passes screening, it will move to an evaluation in which the VC will more closely examine the risk and potential return of the venture. Important factors in the evaluation are, for example, management team quality, team commitment, market size, and product. If the VC wants to invest in the company after the evaluation, it moves to the fourth step: structuring the deal. In this step, the valuation of the company and equity share for the investor are determined. This step can also include additional agreements covering topics such as investor dilution, board seats, management salary, and liquidation events. After the deal is closed, the VC can take a seat in the board of directors or help the company more informally, for example, by making introductions to suppliers, clients, or other investors. The commitment after investment varies between VCs, but typically VCs try to avoid interfering too much with day-to-day operations while being willing to step in and help more in challenging times. (Tyebjee & Bruno, 1984) Figure 6 below shows these five steps of the deal flow funnel. These steps get narrower since not all companies proceed to the next stage.

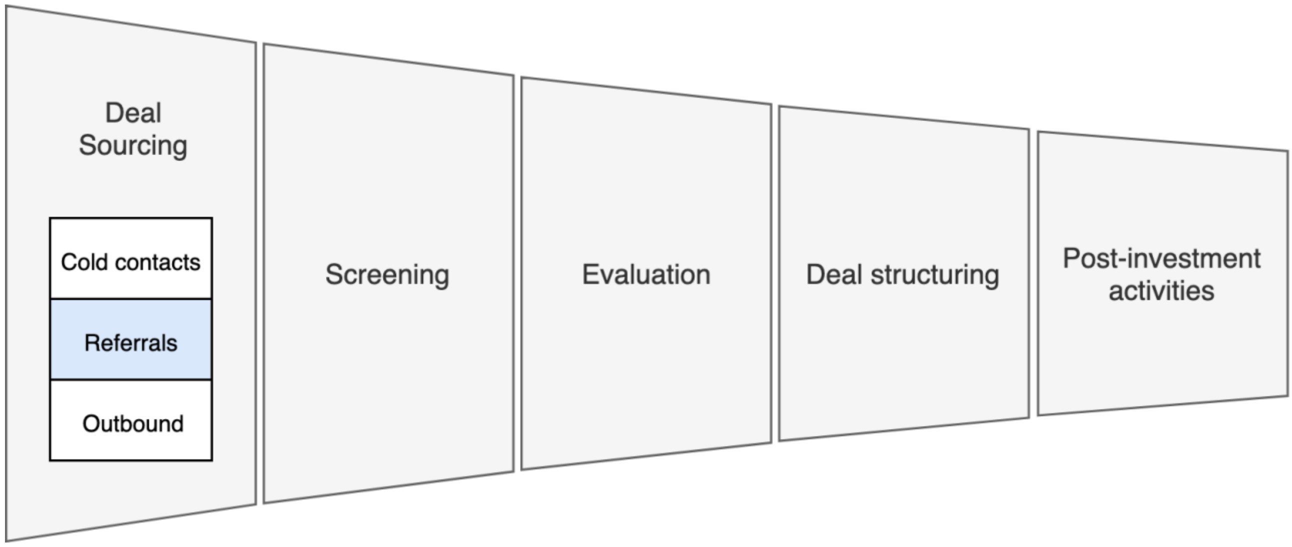

Figure 6: Deal Flow Funnel

Deal sourcing can be divided into three separate sources: Cold contacts, referrals, and outbound (Gompers et al., 2016; Tyebjee & Bruno, 1984). Figure 6 highlights referrals, the focus of this study, as a deal source. A company can be referred to an investor, for example, by other investors, by other entrepreneurs or by other professional connections such as bankers. Table 2 below shows the deal flow sources of VC firms according to four different articles. Referrals from other investors generate around 20% of VCs' deal flow. The number of referrals coming from portfolio companies and personal network varies between the articles but is between 8% and 26% of deal flow. Other professional networks, such as bankers and lawyers, generate the highest number of referrals – up to 44% of cases. Referrals in total, account for 39% to 78% of VCs' deal flow on average. Outbound deal sourcing can be anything where the VC makes proactive effort, such as attending events, to find startups (British Business Bank, 2019). The share of outbound deals of all deal flow is less than 30% on average based on Table 2. However, later-stage VCs typically do more outbound deal sourcing compared to early-stage VCs (Gompers et al., 2016). Cold contacts from entrepreneurs generate 10% to 50% of the deal flow of VCs on average, as Table 2 below shows.

Table 2: Deal Flow Sources

	Gompers et al. (2016)	**Tyebjee & Bruno (1984)**	**Roberts (1991)**	**British Business Bank (2019)**	**Summary**
Referrals (39% to 78% of deal flow)	Other investor referrals: 20%	VC referrals: 21%	VC referrals: 22%	Referrals: 39%	Other investor referrals: around 20% of deal flow
	Portfolio company referrals: 8%	Portfolio company and acquaintance referrals: 26%	Private individual referrals: 13%		Portfolio company and personal network referrals: 8% to 26% of deal flow
	Professional network referrals: 30%	Banker and broker referrals: 18%	Banker referrals: 44%		Other professional network referrals: 18% to 44% of deal flow
Outbound by VC	Outbound: 30%	Outbound: 9%	*Not mentioned*	Outbound: 10%	Outbound: up to 30% of deal flow
Cold contacts from entrepreneurs	Cold contacts: 10%	Cold contacts: 26%	Cold contacts: 22%	Cold contacts: 50%	Cold contacts: 10% to 50% of deal flow

In addition to referrals, outbound, and cold contacts, VCs can also receive deal flow from direct existing connections with entrepreneurs. The authors cited in Table 2 did not identify this direct tie as a separate deal flow source since it is relatively uncommon and, hence, the direct tie is excluded from that table. However, it is shown that VCs are more likely to invest in companies if they have a previously formed a direct tie with them (Shane & Cable, 2002). Additionally, Hsu (2007) points out that successful serial entrepreneurs have a higher likelihood of raising VC funding via a direct tie. Therefore, direct ties are also examined briefly later on, even though they are a rarer deal flow source.

An important notion is, that even if a deal is on VC firms table, it does not guarantee that the VC has access to invest in it. Around 10% of all deals VCs see can be later found dead either due to the unresponsiveness of the company or because they no longer are interested in raising money from that particular VC (Petty & Gruber, 2011). However, high-status VCs have a higher probability of being able to invest in a company they are interested in (Hsu, 2004). The competition is more fierce for late-stage VCs who need to make 50% more investment offers per closed deal than their early-stage peers (Gompers et al., 2016). In more competitive environments, VCs seem to rely less on cold contacting and put more effort into referral networks and outbound to generate proprietary deal flow (Wright & Robbie, 1998).

4.2 Referrals

4.2.1 Referrals as a Deal Flow Source

Referrals account for 39% to 78% of the deal flow VCs receive, making it arguably the most important deal flow source for VCs (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984). Referrals are frequent in many industries outside of venture capital and, therefore, they have received attention in literature outside of venture capital context.

When transacting with a person who is known to be reliable, a positive reference from a trusted informant increases the trustworthiness of that person (Granovetter, 1985). Referrals allow VCs to access information about people whom they do not have a direct connection to, helping them to access a broader range of information and people than what they could alone (Burt, 1997). Indirect ties between people can be helpful in uncertain conditions since they can give access to private information and also create a social obligation (Shane & Cable, 2002). The referral connecting the indirect tie carries the social expectations from the ongoing relationship to the newly formed one (Uzzi, 1996). Often people have some social debt to each other caused by reciprocity (Gouldner, 1960). Coleman (1988) suggests that this reciprocity creates a social obligation, a form of social capital, that can be transferred in the referral to others who can then benefit from it.

Referral increases the likelihood of an investment. In the UK, VCs are over 13 times more likely to invest in a referred company compared to a company that cold contacted them. Also, referred companies enjoy twice the likelihood of being invested in compared to companies that VCs reached out to themselves. Of the investments VCs make in the UK, referrals generate an impressive 82% share. (British Business Bank, 2019)

Not all referrals are equal. The relationship between the referee and the VC affects the strength of the referral. In general, a stronger tie between referee and VC, a stronger tie between referee and entrepreneur, and higher mutual trust among referee and VC make the referral stronger and potential investment more likely (Batjargal, 2007). This emphasizes the importance of seeking a referee who ideally has a close connection both to the VC and to the entrepreneur seeking funding. Roberts' (1991) case study of two VC firms found that for the first VC the type of referral source was not relevant while the second VC was more likely to accept referrals made by other VCs. For them both, the previous experience with the referral source predicted the likelihood of investment. Referees with more previous referrals, and especially previously accepted referrals, had a significantly higher chance of being accepted on their new referral creating a virtuous cycle. (Roberts, 1991) The prominence of the referee increases the strength of a referral (Maula, 2001; Stuart et al., 1999), as well as the referee's domain-specific expertise (Reuber & Fischer, 2005).

Fiet (1995) found that VCs rely more on their source of information when they gain more experience of exchanging information with them. VCs tend to rely most on other VCs, and the best referral is often another VC who is also investing in the company (Fiet, 1995). This syndication process is elaborated in the next subchapter. Heuven & Groen (2012) argue that referrals coming from business-focused referees are stronger than referrals from technology-focused referees.

A close connection between the referee and the VC leads to highly relevant referrals since the referee recommends high-quality companies that fit the VC's investment scope, level of involvement, and personality. This matching reduces VCs' workload in deal sourcing since they need to spend less time searching and identifying suitable companies. Referees who are VCs' friends have a low threshold to refer potential cases since they face few social constraints. Referees might have selfish incentives when referring companies to VCs: good referrals can create indebtedness of VCs to referee. Hence, referees have a motivation to refer strong cases to VCs. VCs listen to referees' opinions on the company's team, potential growth, and technology. This trust between referee and VC can create a bias toward the referee's capabilities, which can positively affect VCs' decision to invest. (Batjargal, 2007)

VCs can receive referrals from many different sources. Professionals from established organizations, such as law or accounting firms, who are active in the venture capital community can be helpful for an entrepreneur seeking for a warm introduction while small service organizations and individual professionals tend to provide less value. Some entrepreneurs also use finders who help them to fundraise in exchange of a 5 to 10 percent fee of the money raised. Experiences with finders often range from unethical to ineffective, and they are generally not held in high value in the venture capital community. (Roberts, 1991)

Around two-thirds of VCs in the UK have received referrals from business angels and around the same share of VCs have sent referrals to business angels. Usually, there is an existing business relationship between the parties before the referral. Most VCs receive less than one referral from business angels per month, while a quarter gets more than two referrals per month. VCs agree that the quality of cases depends on the source since not all business angels have access to proprietary deals. Business angels typically refer cases that require funding beyond their means to VCs while VCs refer cases to business angels that are too small, that require specific help or knowledge from the business angel, or that are out of the VCs investment focus. (Harrison & Mason, 2000)

Referrals from other VCs account for around 20% on average of VCs' deal flow (Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984). These other VCs can either invest at earlier-stage, same stage, or later-stage compared to the VC receiving the referral. VCs who invest at the same stage can syndicate their investments, meaning that they invest together in a company. The lead investor of the syndicate often invites other VCs to the investment round. For the invited VCs the syndication request is pre-screened referral deal flow. (Jääskeläinen, 2012)

4.2.2 Syndication as a Referral Source

VC firms often collaborate on financing rounds instead of investing alone. In syndicates, several investors come together to finance a company. This group of investors is determined by the opportunities and needs of the company and the participating VC firms. Often the syndication lead is responsible for inviting other VCs to the investment round, and for these other VCs, the invitation to syndicate is referral deal flow. It is also possible that the invitation to syndicate originates directly from the founder. Syndication is critical to understand since it is common among VC firms, and it also affects the motives behind referrals. (Jääskeläinen, 2012)

The antecedents for syndication are VCs firms' goals of having more information, resources, and skills to maximize their performance. In practice, this means that by syndicating VCs seek collaboration to validate their investment decision, to increase expertise and contacts available for the investment to maximize its performance, and to provide additional funds to decrease their risk. (Jääskeläinen, 2012) Sometimes syndication can be necessary to reduce conflict of interest and information asymmetry (Admati & Pfleiderer, 1994), to secure intellectual property (Bachmann & Schindele, 2006), or to align the motives of VC firms and strategic investors such as corporations (Hellmann, 2002). Syndication also offers a way to seek affiliation with highly successful companies (Lerner, 1994), form connections to prestigious VC firms participating in the syndicate (Fund et al., 2008), and to increase portfolio to new industries and geographies (Sorenson & Stuart, 2001).

Syndicate is typically managed by a lead investor who will also be most hands-on with the investment target by having a board seat, for example. Joining a syndicate as a non-lead investor allows a VC firm to add a new portfolio company with a significantly smaller time commitment. Invitations to syndicate are also pre-screened deal flow from the lead investor, which require less screening from the non-lead investors. (Jääskeläinen, 2012) Fiet (1995) found that VCs often see other VCs who are investing in a company as the most credible source of information when evaluating that company. The lead investor's choice of choosing other investors to the syndicate is driven by the potential value-add of other investors (Manigart et al., 2006), the strength of relationships with them (Sorenson & Stuart, 2008), and their perceived status and reputation (Dimov & Milanov, 2010). From a non-lead investors' perspective, their social networks will profoundly affect whether they will be part of investment syndicates formed around the most sought-after deals or not (Fund et al., 2008). Syndicating investments, instead of investing alone, can also generate future deal flow from the invited syndication partners (Hochberg et al., 2007).

Hence, VCs can aim to syndicate with investors who are most likely able to reciprocate the invitation in one way or another (Lerner, 1994).

4.3 Outbound by VC

VC firm's outbound efforts can generate up to 30% of their deal flow on average (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984). VCs can proactively generate deal flow for themselves by for example attending events (British Business Bank, 2019), using social media such as Angel List and Twitter (Teten, 2014), using databases such as PitchBook (PitchBook, 2019) and Crunchbase (Crunchbase, 2018), or by using quantitative sourcing which means they use data analysis for multiple data sources to spot suitable investment opportunities (Gompers et al., 2016).

Outbound deal flow is often higher quality than cold contacts. Companies that VCs reach out to have a six times higher chance of receiving funding compared to companies who cold contact VCs in the UK. However, these outbound deals still have over two times a lower chance of receiving funding than companies who got a warm referral to VCs in the UK. (British Business Bank, 2019) From a VCs perspective outbound should not be overlooked: with over 300 investments First Round Capital noticed that their investments in outbound cases outperformed their investments in referred cases by almost 60% (First Round, 2015).

New VC firms typically need to rely more on outbound deal sourcing unless they have already managed to build a brand (Yang, 2018). A VC firm can be relatively well-known even before its launch if, for example, it is co-founded by a high-profile VC (O'Hear, 2017). When the VC becomes more established, the number of cold contacts increases, and they need to put less effort into creating outbound deal flow (Yang, 2018).

4.4 Cold Contacts from Entrepreneurs

Entrepreneurs contacting VCs directly without a prior connection generate 10% to 50% of VCs' deal flow on average (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984). In case there is no existing connection between two parties, they are more likely to transact in an arm's-length relationship which is less based on mutual trust and more prone to opportunistic behavior (Gulati, 1995; Uzzi, 1996).

Many VCs advice entrepreneurs to avoid cold contacting (Flaherty, 2018; Lowercase Capital, 2017; Martinez, 2015; Park, 2017). However, still, 50% of pitch decks received by VCs are coming in cold while only 8% of companies funded are initially cold contacts in the UK (British Business Bank, 2019). Point Nine makes around 5% of their investments in companies that cold contact them, and they try to improve the relevance of cold contacts by advising founders on how to approach investors (Martinez, 2015). Some VCs go as far as not accepting cold contacts at all, such as now-retired one of the most successful VCs in the world Chris Sacca (Konrad, 2017). Sacca's VC firm Lowercase Capital used to state this on their website with a notion that they have never invested in a company that cold contacted them and that they get their best cases from trusted referrals (Lowercase Capital, 2017).

The initial cold contacts that pass the screening of a VC firm might very well be worth the effort: investments in companies that directly approached a VC firm First Round outperformed referred companies by over 20% in their portfolio of 300 companies (First Round, 2015).

4.5 Direct Ties

In addition to referrals, outbound, and cold contacts, VCs can also receive deal flow directly from entrepreneurs with whom they are already connected. The studies cited in Table 2 did not identify this direct tie as a deal flow source since it is relatively uncommon. However, direct ties have a particular nature, especially in the case of serial entrepreneurs; hence, they are elaborated in this chapter.

Having a positive personal experience of dealing with a person increases their trustworthiness even more than a referral. First-hand knowledge from an existing relationship is cheap, is easier to trust due to its detailedness and accuracy, creates an economic incentive to maintain a relationship for future transactions, and often involves social expectations of trust and not being opportunistic. Social relationships are based on trust and fairness, unlike transactional arm's-length relationships, which are driven by self-interest. (Granovetter, 1985)

Existing social tie between two parties can change the economic behavior between them from an arm's-length relationship to a social relationship and this social tie also shifts the expectations of trust and behavior from the existing social relationship to the new business relationship (Uzzi, 1996). When building a business relationship on top of a social relationship the existing direct tie can create an obligation to behave loyally and encourages to act in an honest manner, which helps both parties to act more generously toward each other (Gulati, 1995). In addition to increased trust, social ties allow more proprietary and tacit information flow of people's skills and trustworthiness (Uzzi, 1996).

Business experience, in general, increases the likelihood that an entrepreneur can have access to financing directly without referrals (Heuven & Groen, 2012). Especially founders who are building their second or third company can have an advantage with their track record and existing connections to investors (Roberts, 1991). Hsu (2007) also agrees that founders with successful prior companies have a higher likelihood of raising VC funding via direct social tie, meaning that the founder already knows the VC personally. In general, companies with more social capital and especially direct or indirect connections to VCs have a higher chance of surviving and also a higher chance of raising funding (Shane & Stuart, 2002). More specifically, VCs are more likely to invest in companies when they have a previously formed direct connection to them (Shane & Cable, 2002). From the founders' point of view, their social network, and the direct ties they have directly affect the success of their company (Jenssen, 2001).

In some occasions, the direct tie between the entrepreneur and VC is so strong that the VC hires the entrepreneur as entrepreneur-in-residence (EIR). Typically, an EIR has just exited a company, often a portfolio company of the VC, firm and is planning to launch a new one soon. The VC aims to fund the next company the EIR creates. Typically, VCs evaluate if the team is competent enough for investment, but in the case of EIR, the VC is already committed to the jockey but needs to find a suitable horse for it. (Kane, 2014)

4.6 Network Perspective on Deal Sourcing

To conclude the findings from the literature review, deal flow sources from a network perspective are presented below in Figure 7. Cold contacts, outbound, and direct contact are deal sources mainly driven by VCs internal resources. However, VCs' networks also affect how much cold contacts they receive since more connected VCs are more desired investors (Ferrary, 2003). In general, more networked VCs receive more investment opportunities (Sorenson & Stuart, 2001). Referrals are one channel, arguably the most important (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984), via which these investment opportunities generated from the VC's network reach the VC. VC's external resources drive referrals, and the referral generation is affected by network characteristics on all three levels. On a dyadic-level, the individual relationships VC has with referees affect the strength of referrals, affecting the likelihood of a potential investment (Batjargal, 2007). On a portfolio-level, the number of ties and their mix (for example, strong versus weak) affects the network that generates referrals, but the mechanism and outcome are relatively unknown. Finally, the network-level of ties has several effects on referrals, most of which are not well-known. Structural holes' effect on referrals has not been studied. Network centrality's impact on referrals has not been studied directly, but other studies on centrality indicate that it could affect referrals positively (Gulati, 1998; Gulati & Gargiulo, 1999). However, the centrality of VCs' connections and its potential effect on referrals is also relatively unknown. High status and reputation seem to positively affect referral generation from the network (Dimov & Milanov, 2010; Ferrary, 2003; Podolny, 1993). The research sub-questions of the study are also included in Figure 7 in a condensed form under the level (dyadic, portfolio, or network) on which they affect referral generation.

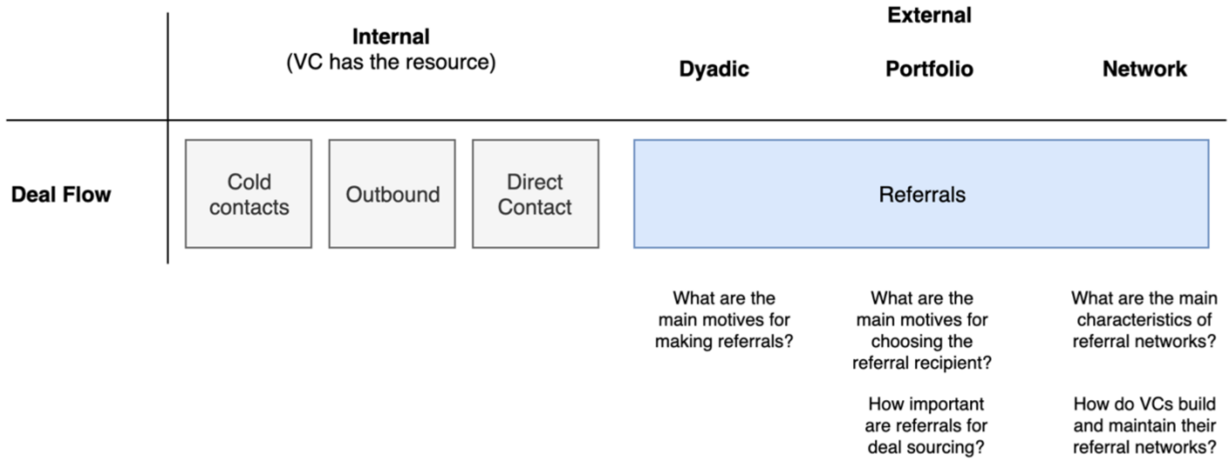

Figure 7: Deal Flow Sources from Network Perspective

The mechanisms how dyadic ties, portfolio of ties, and network of ties affect referral generation are still relatively unknown. Additionally, several of the attributes on each level is still unrevealed for academia. Hence, both the main attributes of referral networks and their effects on referral generation have not received sufficient attention in the literature.

5 Methodology

5.1 Research Approach

While working with VCs, the importance of their connections has become evident. Many VCs spoke about referrals and seemed to rely on them significantly. However, VCs had different approaches to how to develop and maintain referral networks, and VCs seem to be highly curious about how other VCs are managing their referral networks. In academia, this phenomenon has not received much attention beyond dyadic ties and the share of referrals of deal flow. Hence, the broader understanding of referral networks is still missing. Since the objective of the study is to understand this referral phenomenon more comprehensively in the venture capital context, a qualitative approach for the research was chosen. Qualitative research is more suitable for discovering how a phenomenon works and developing a theory based on those findings. Also, qualitative research is especially relevant for studying social relations, which are an essential part of the topic studied. (Flick, 2009)

A case study was chosen as the used research method for this thesis due to several reasons. A case study is well suited to answer "how" and "why" questions, it does not require control of behavioral elements, and it can also focus on contemporary events. It is especially beneficial in understanding complex social phenomena while retaining holistic and meaningful features of authentic events when the distinction of the phenomenon studied and the context in which it happens is not evident. (Yin, 2003)

Data collection and analysis in case study research are often based on prior academic results. In academia, referrals for VCs have been studied briefly, and those studies have often been focused on dyadic ties between the referee and the VC or on quantifying the share of referrals of total deal flow. However, the dyadic ties have not been examined closely, and the network-level perspective of referrals is almost completely missing, presenting a research gap.

Due to this research gap, an inductive approach was chosen to understand the phenomenon more thoroughly. An inductive approach is especially suitable for researching new topics (Eisenhardt, 1989) and developing concepts (Flick, 2009). In this approach, the data collected is used for theory building instead of testing existing hypotheses in a new context, and the aim is to generate propositions that can be used for quantitative testing (Welch, Piekkari, Plakoyiannaki, & Paavilainen-Mäntymäki, 2011).

Prior academic results were used as a basis for the data collection and analysis, but they were insufficient to provide an existing theory to be tested. To understand the referral phenomenon more thoroughly, a qualitative case study with an inductive approach to build theory is both a suitable and justified choice for methodology.

5.2 Data Collection

Since the venture capital industry is complex and has its particularities, to be able to understand a specific phenomenon, develop a theory, and build on top of previous academic literature, it is required to comprehend the topic and surrounding context also from the theoretical viewpoint. Even though the referral phenomenon in venture capital has not received much academic attention on the network level, it has been studied on a dyadic level, and its share of deal flow has also been researched. Hence, the thorough literature review conducted needed to combine studies covering venture capital in general, network theory, and venture capital deal sourcing, including referrals. Venture capital literature provides a general understanding of the context, network theory provides a lens to examine the referral network from a theoretical viewpoint, and deal sourcing literature including research on referrals gives a more specific understanding on the mechanism of deal flow and the current findings on referrals on a dyadic level.

A systematic search for relevant literature was conducted using several established databases, including Google Scholar, EBSCOhost, and ProQuest. Many different keywords were used, and the few dozen first search results were examined briefly. Based on the title, the times cited and the abstract, the most relevant results were chosen for closer examination. Additionally, the references of the found articles were also examined to find new relevant articles until the iterative process reached a saturation point where additional literature no more added significant information on the topic studied.

After the literature review, primary data was collected via interviews. Since the research aims to understand a specific phenomenon thoroughly to form a theory, purposeful sampling was the most feasible method for data gathering. The goal of purposeful sampling is to identify and select informants who are most knowledgeable about the phenomenon studied, are available and willing to participate, and can communicate their knowledge articulately (Palinkas et al., 2015). Most of the data sample was predetermined to secure a sufficient quantity of interviews in both locations (Helsinki and London), but additional interviews were also decided during the data collection phase by using snowball sampling. Snowball sampling means that, several of the interviewees provided recommendations for informants who would be most suitable to provide valuable information on the research topic. Several of these proposed informants were added as informants for this study.

The primary data sources of the study were eleven venture capital firms based in two European startup hubs: six of the selected VC firms were based in London and five in Helsinki. Since the phenomenon studied is complex and was anticipated to have some location-specific elements, it was necessary to have several data sources from all selected locations. Hence, with the limited time available for the study, two European hubs were selected to ensure a sufficient amount of data from all locations. Once the findings from the interviews started to repeat themselves, a sufficient total amount of interviews were obtained.

The VC firms were selected by taking into account factors such as their location, fund size, geographical focus, and stage focus. All of the selected VC firms had their headquarters in London or Helsinki, their fund sizes were less than 150 million euros, they invested primarily in European startups (or a sub-segment of Europe), and they preferred to invest at seed or series A stage. The founding years of the VC firms ranged from 2005 to 2018, and most of them did not have a strict industry focus, while all invested mostly in companies that have a technology element.

Prior work experience has helped to form connections in the venture capital industry, through which direct access to all of the VC firms selected for the study was available. Some VCs made referrals for additional interviews, but they were dismissed as were some of the direct interview requests. However, most of the VCs approached were willing to participate in the study, and most of the interviewed VCs mentioned they would like to read the final study, which indicates the relevance of the chosen topic.

Most of the primary data were collected in semi-structured interviews with one exception who answered the interview questions via email. Semi-structured interviews were chosen to lead the discussion into a predetermined direction while leaving space for open discussion, additional questions, and the emergence of new ideas. In semi-structured interviews, there is a possibility to probe answers, so that the interviewee can explain, or continue, their answers which add significance and details to the obtained data (Saunders, Lewis, & Thornhill, 2009). The interviewee can also take the discussion to areas that were not previously considered by the interviewer, but which are valuable for comprehensive understanding and can help to answer research questions (Saunders et al., 2009). The main benefit of semi-structured interviews is that the data is, to a moderate extent, systematic and comprehensive, even though the interview tone stays quite relaxed and informal (Eriksson & Kovalainen, 2016).

The literature review was mostly conducted before data collection to guide the formation of questions for the semi-structured interviews. These questions aim to address the research questions and were collected to an interview guide. Some of the questions were updated and added during the interview process when new insights of the phenomenon studied were discovered. Since the interviews conducted were semi-structured, the precise wording and the order of the questions changed from one interview to another while the themes discussed remain consistent. The interviews were conducted in person whenever possible, and otherwise, video or phone calls were used except for one interviewee who answered the questions by email. All interviews were organized individually except interview 6, in which an associate answered most of the questions, but a partner at the same VC firm answered several questions since the partner happened to walk by the interview and was able to provide additional insights. The language used for the interview was Finnish or English, depending on which the interviewee was more comfortable with, and the targeted length of interviews was 40 to 60 minutes. The interview guide used is in Appendix A.

In total, 11 interviews were performed. Most of the interviewees were founding partners of their firms, while all except one were partners. These representatives of the VC firms were selected based on their position at the firm. Partners, and especially founding partners, often have the most comprehensive understanding of how their firm operates and are hence, the most knowledgeable to provide insights to the research questions of the study. All of the interviews were recorded and transcribed with the permission of the interviewees. To create trust and maximize the richness of interviewees' answers, all the interviewees and their answers are anonymous. Hence, interview codes are used when interviewees are quoted. These codes and the profiles of interviewees are shown in Table 3 below. The profiles include the primary location of the VC firm, the title of the representative interviewed (partner and founding partner are not differentiated), and the length of the interview.

Table 3: Description of the Research Sample

Interview Code	Location	Title	Interview Length
Investor 1	Helsinki, FIN	Partner	65:25
Investor 2	Helsinki, FIN	Partner	56:18
Investor 3	Helsinki, FIN	Partner	44:10
Investor 4	London, UK	Partner	46:01
Investor 5	London, UK	Partner	42:22
Investor 6	Helsinki, FIN	Associate (Partner answered some questions)	56:40
Investor 7	London, UK	Partner	39:24
Investor 8	Helsinki, FIN	Partner	41:51
Investor 9	London, UK	Partner	37:15
Investor 10	London, UK	Partner	38:14
Investor 11	London, UK	Partner	email

Additional secondary information sources were also used to complement the interviews. Several of the interviewees provided internal documents regarding the distribution of their deal flow sources and investments. Also, online databases, such as Crunchbase were used to guide and cross-check the interviews.

5.3 Data Analysis

Data analysis was guided by the Gioia method described by Gioia, Corley, & Hamilton (2013) to bring qualitative rigor to the analysis. This analysis process was iterative and happened partly simultaneously with the data collection phase, which is typical for inductive research. However, there are some distinct steps in the analysis phase, and during these steps, the insights gained were refined and developed.

Before the analysis, the interviews were transcribed to text and read thoroughly to become familiar with the data. Then the analysis began with open coding to find all relevant information from the interview transcripts (Strauss & Corbin, 1998). This 1st-order analysis meant reading the transcripts and creating codes and categories to specify the content without focusing much on the number of codes and categories. The unit of analysis chosen for the coding was specific themes instead of linguistic units (such as words or sentences), and both the coding schemes and categories were derived inductively from the data as suggested by Zhang & Wildemuth (2009) for inductive studies.

As the analysis proceeded further, differences and similarities among the numerous different categories were searched for, which reduced the number of relevant categories to a more practical number (Gioia et al., 2013). Constant comparative method was also used to highlight differences between categories by (1) systematically comparing each code assigned to a specific category with all the codes already in that same category, to understand the properties of the category comprehensively; and by (2) integrating overlapping categories (Zhang & Wildemuth, 2009). The categories were then labeled by using interviewee terms whenever possible, after which the data was examined on several levels (1st-order codes and potential 2nd-order themes) simultaneously. This examination led to a better understanding of the topic studied, guiding further interviews to focus more on themes and relationships between them that had emerged from the initial interviews. (Gioia et al., 2013)

The more abstract 2nd-order themes were then created based on iterated 1st-order codes to explain the studied phenomenon more holistically. Once the 2nd-order themes and 1st-order codes were in place, the possibility to combine 2nd-order themes into aggregate dimensions was investigated. Finally, the 1st-order codes, 2nd-order themes, and aggregate dimensions were combined to a data structure providing visual aid and showcasing how the progress from raw data to themes and aggregate dimension was made demonstrating qualitative rigor. (Gioia et al., 2013) The resulting data structure can be seen in Figure 8 below.

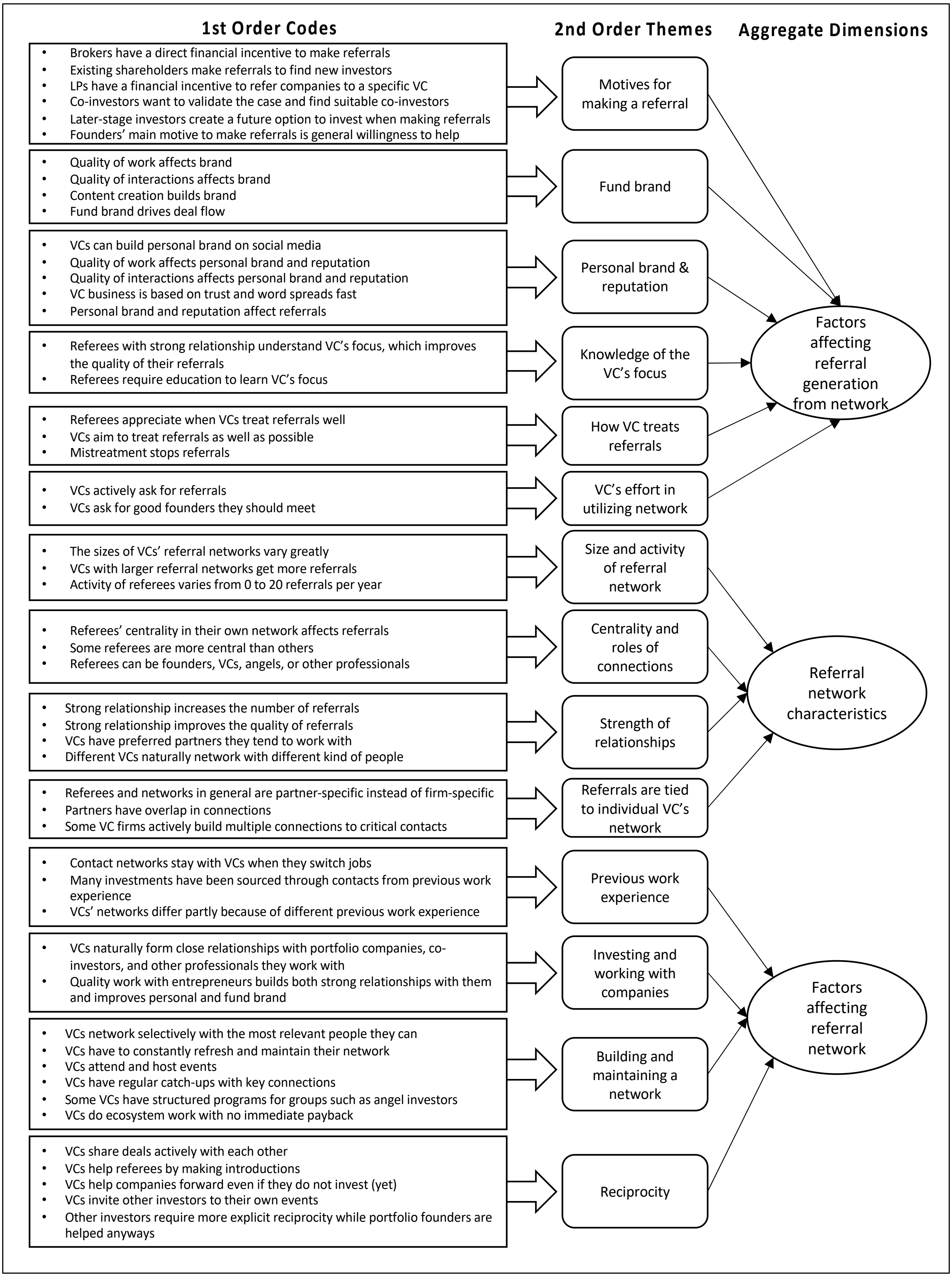

Figure 8: Data Structure

5.4 Reliability and Validity of Research Results

Yin (2003) describes four standard tests that are applicable for case studies to examine validity and reliability: construct validity, internal validity, external validity, and reliability.

Construct validity means using suitable measures for the concepts researched, so in other words, it means how well the test measures what it should be measuring (Yin, 2003). Construct validity is often problematic for case studies, and to achieve it Yin (2003) identifies two separate steps: "(1) Select the specific types of changes that are to be studied (and relate them to the original objectives of the study) and (2) Demonstrate that the selected measures of these changes do indeed reflect the specific types of change that have been selected." Yin (2003) also proposes three tactics to achieve construct validity in case studies: using multiple evidence sources, establishing a chain of evidence, and having informants review draft of the results. All three tactics were used in this study. First, 11 interviews conducted separately, and additional documents from the interviewees provided multiple data sources that were mostly consistent. Second, the chain of evidence was established by using the Gioia method (Gioia et al., 2013) to achieve qualitative rigor. Third, two of the interviewees reviewed the identified 2nd-order themes and provided feedback, which helped the iteration and fine-tuning of the data structure formed.

Internal validity considers the causal relationships formed, so how certain conditions lead to other conditions. Hence, it is only relevant for causal or explanatory studies and not for exploratory ones. Since this study is mostly exploratory with minor explanatory elements, this is covered only briefly. The main contributors to internal validity are the direct comments from the interviewees identifying or confirming a causal relationship, and the data structure built with qualitative rigor. (Yin, 2003) As Gioia et al. (2013) mentioned, a "conceptual leap" is required to generate a grounded model showing dynamic interrelationships from the static data structure. Additionally, tying the developed theory to existing literature, which is done in the discussion chapter, increases the internal validity of the study (Eisenhardt, 1989).

External validity, also known as generalizability, measures how well the findings of the study are generalizable to other domains outside of the study's focus. (Yin, 2003) Even though the study is systematic and rigorously conducted, it only considers VC firms located in two European cities, so the applicability to the global venture capital industry, in general, cannot be guaranteed.

Additionally, the study focuses on seed and early-stage VC firms, which can reduce the applicability of findings to later-stage investors. The fact that the study found several different approaches to and compositions of referral networks increases the external validity of the results since the scope of approaches covered is higher than in a single-case study. Some of the findings in key attributes of a referral network could also potentially be generalizable while the specific values in each attribute seemed to be location-specific and should not be generalized without caution. It could be argued that the study also contributes to the creation of new academic results regarding referral networks of VCs, which is previously a less-studied research area.

Reliability is achieved if the same case study conducted later using the same procedures would provide the same results (Yin, 2003). Threats to reliability can further be divided into participant error, participant bias, observer error, and observer bias (Saunders et al., 2009). Participant error was minimized by conducting most of the interviews in the middle of the day and at the interviewees' offices if possible so that a different interview setting would not affect their answers. Participant bias was minimized by interviewing mostly the most senior partners in the VC firms so that they did not have to worry what their bosses would think of their answers or how they should answer. Additionally, the anonymity of the responses was confirmed at the beginning of the interview to create as open and relaxed discussion as possible to further reduce participant bias. The semi-structured questions used for the interviews helped to reduce observer error, but the questions were also updated during the interview process as is typical for semi-structured interviews. Observer bias was minimized by using qualitative rigor in creating a data structure transparently from the 1st-order codes and by iterating and confirming the found 2nd-order themes with some of the interviewees. Additionally, reliability, in general, was improved by acquiring internal documents to provide additional information on the topic studied.

6 Findings

6.1 Factors Affecting Referral Generation from Network

6.1.1 Motives for Making a Referral

Relevant referral creates social capital in two directions: both the founder being referred and the VC receiving the referral will be grateful for the referee. The referral requires minimal effort from the referee, but his reputation will be on the line when his vouching for the company. Therefore, a referee who knows what the VC is looking for tends to refer high-quality cases.

In some cases, the referee has a direct financial incentive to make a referral. This incentive can be in the form of retainers, success fees, or even equity of the company. These fees divide opinions in the early-stage phase quite clearly. One of the investors interviewed had invested in two cases referred by a broker while another said it is immediately a no-go if an early-stage founder cannot raise money themselves. Another interviewee said that the compensations are appropriate as long as they are reasonable and semi-transparent. Brokers, fundraising consultants, and some advisors are driven by a direct financial motive to make referrals to potential VCs.

It is common that the referee has a financial incentive in the success of the referred company that is not explicitly tied to the fundraising process. This group consists of shareholders and particularly existing investors who are one of the most active referee groups. They want to help the company to secure follow-on financing, which helps their original investment to grow in value. As one of the VCs described:

> With other VCs its purely business. When they (existing investors) contact you, there’s no need to think that it’s non-profit activity. They simply want their investment to get more funding (Investor 3).

The referee can also have a motive to help a particular VC fund to succeed, which drives them to refer potential investment opportunities for that VC when they come across them. The group most explicitly driven by this motive is the limited partners of the VC fund who want to maximize their return on investment and hence are motivated to help the VC fund to succeed. Another group that is driven by this motive is venture partners. Their incentives are also transparent and known in the industry as an investor explains:

> If he (referee) is a venture partner, he'll get a personal carry (Investor 6).

Another common motive for a referral is to validate the investment and pool sufficient capital to fill the investment round. In these syndication cases, the referee might be looking for specific industry expertise or otherwise trusted investors. Referees looking for potential co-investors are driven by this motive. One of the interviewees gave an example of a referral they received:

> "We're looking at something, it's in the X space, you guys have invested in Y and Z and others. Do you want to take a look as well?" That's a highly qualified lead (Investor 5).

One motive for the referral is to create an implicit option for future investment. This motive is relevant for later-stage VCs who can come across up-and-coming teams and want to help them forward by referring them to an earlier stage VC. By referring a case to their earlier-stage peers, they create reciprocity that can help them to invest in that particular case later on. As one of the investors explained:

> There's kind of the implicit understanding that if they refer a deal, and we do it, they'll get first dibs when it comes to their stage of investment (Investor 9).

Often the referees have no direct benefit of making the referral, and their motive is just general willingness to help. They might still acknowledge the possibility for future reciprocity. This motive is typical, especially within founders and friends of the founder. As several of the investors interviewed described:

> There's also a ton of people, especially founders, who would just do this for good karma. And you never know, sometimes 5 or 10 years down the line you get payback for helping someone, and that's great (Investor 7).

> It could be the referee's friend, for example. So, of course, the referee wants that company to thrive. Otherwise, they would not have referred it. But very rarely, they have a financial incentive to make the referral (Investor 2).

> They (referring founders) seem to be quite altruistic (Investor 4).

Table 4 below summarizes the six main motives for making a referral and the referees who are typically driven by these motives. This categorization does not cover all possible motives, and any of the referees can also be driven by another motive, general willingness to be helpful, for example, or by a combination of several motives.

Table 4: Motives for making a referral

Main motive to make a referral	Referee
Direct financial incentive to fundraise	Brokers, fundraising consultants
Financial incentive in the company's success	Existing investors and other shareholders
Financial incentive in the VC's success	Limited partners, venture partners
Validate the case and find suitable co-investors	Potential co-investors
Create a future option to invest in the company	Later-stage investors
General willingness to help	Founders, friends of the founder

6.1.2 Motives for Choosing a Particular VC as the Referral Recipient

6.1.2.1 Fund and Personal Brand

Choosing to which VCs the founder talks to is not necessarily extremely systematic in the first funding rounds, and several attributes affect the selection of the VC. As one investor painted the starting point:

> Everyone wants as good people and as good investors as possible to these firms they're part of, or they want to refer (Investor 2).

What does this mean in practice, then? One key attribute in evaluating VCs is brand. This attribute is especially important when a founder is actively hand-picking a particular set of VCs he wants to talk to and then finds the people who can introduce him to these VCs. As the interviewees explained:

> Venture capital is very much brand business, and we have a really good brand. All the rational founders come to us first, which helps our position (Investor 2).

> Even if we get inbound interest through [our content], I think again entrepreneurs are quite well educated about being sure they get intros and so they, like I said, they engineer the referrals (Investor 7).

The investors interviewed identified three separate drivers for building a brand: content creation, quality of interactions, and quality of work. Only a few of the interviewees put significant effort in content creation while many others acknowledged the possibility of it. For the few, content creation was a significant driver of their personal and firm brand. There was also a clear distinction: some used content mainly to drive the personal brand of VCs, while others used it to boost the VC firm brand. While VC's personal brand and VC firm brand are mutually reinforcing this distinction highlights a slight difference in strategic approach. As one of the interviewees explained their approach to content creation:

> The other aspect to what we do, which is quite strong in the case of [Investor 7's firm], is building personal brand and mindshare. In my case, I have […] thousand followers on Twitter. It's all organic. It's all built by hand. There's no PR agency involved. I've done a lot on Medium. I have […] thousand followers on Medium. […] We never would really pitch our companies or our fund, so it's really around providing value, so it's implicit marketing (Investor 7).

The brand of many VCs is not mainly built by marketing or content creation, but more by the work and personal interactions that the VC has. The quality of these interactions is another attribute affecting referrals, and it has to be good for the VC to start receiving referrals. As the interviewees explained:

> Providing founders with a great experience when they meet us is absolutely mission critical (Investor 7).

> I don’t think there’s much else than doing your work well no matter what the role or occasion, so that your interactions leave a good impression for the people on the other side. They know we’re investing, so when they come across an interesting case, they’ll probably send it our way (Investor 3).

Another key attribute that drives VC’s brand is the quality of work the VC does. This quality of work goes hand-in-hand with the quality of interactions, but it is separated here to acknowledge the difference of being a great person to work with and of doing excellent work, both of which are essential for a top-tier VC brand. The quality of work affects the brand and directly the referrals that a VC gets. As the investors explained:

> The reason why [another investor] has so good brand is because of [very successful exit] (Investor 1).

> In the VC industry, the brand is built by actually working with the founders, and the founders are the best references (Investor 2).

> We invested in this company called […] with […]. It was a very good working relationship. They came to us six months later they said: “Hey guys we’ve already signed this term sheet with this other Germany company. There’s capacity to bring someone else on board. Do you guys want to come on in?” And that is a super high-quality lead because this is not “we’re thinking about it” this is “we’re investing, it’s this company, do you want to join us?” (Investor 5).

Both the quality of work and quality of interactions feed directly to the VC firm’s brand but especially to the VC’s personal brand and reputation. While these both are needed for a top-tier VC brand, content creation is not necessarily required for achieving prestige. However, content creation can naturally help to reach a much wider audience than a personal network could. For all

VCs, a significant part of their personal brand and reputation is built working with the companies day in day out. As one of the investors described:

> Founders and co-investors see how we work, and they talk. And that is your brand, how other people talk of you. And you can measure it by how much you get referrals and inbound. Because if you're not a wanted lead investor, board member, or co-investor, the referrals will stop (Investor 1).

Another attribute affecting the selection of a VC is the specific expertise and focus that the VC has. The referee takes into account the scopes of the VCs, industries, and areas they are primarily looking into and segments where they have the most knowledge and experience. This focus can be seen as a sub-segment of quality of work and hence also feeds directly to firm and personal brand. As one of the investors who have significant experience in a specific industry was approached:

> "We're looking at something, it's in the X space, you guys have invested in Y and Z and others. Do you want to take a look as well?" That's a highly qualified lead (Investor 5).

6.1.2.2 Knowledge of the VC's Focus

In the seed stage, many VC firms do not have a clear industry focus, but it is still essential to communicate, what the VC firm is looking for so that potential referees understand which opportunities are relevant for that specific VC. Sufficient knowledge of the VC's focus is essential for a successful referral. As one of the interviewers explained:

> It also requires education that people who refer cases to you understand what you're looking for. And you know, that's something we also make sure we do, which is to say look, this is the stage we are in, these are the kinds of deals we like, or the you know the sort of exclusions we have around what we're looking at, so that they're really able to tailor with this (Investor 7).

The relevance of a specific VC also applies when VCs start to refer their own portfolio companies the later-stage investors. Then, both the focus of the VC and the specific expertise they have affect the decision. One of the interviewers said they use this criterion as well:

> When we want to refer our portfolio companies, we think of 2 or 3 investors that would actually be valuable for the company. Then we make introductions to those investors and see if they're interested (Investor 2).

6.1.2.3 How VC Treats Referrals

One key attribute affecting the referrals, especially in the long-run, is how the VC treats the referrals they receive. This attribute is especially vital for active referees who refer multiple cases a year. The referee is not only vouching for the company to the VC but also the other way around. Hence, the referee will naturally prefer VCs who treat the referrals respectfully. As two of the VCs interviewed described:

> A number of them, I think, appreciate that we tend to treat the founders they send to us quite well, and not everybody does that in the market. So, your behavior towards the things that they refer is important in terms of keeping these kinds of referrals alive. So, some angels, for example, are not particularly fans of VCs and so they're fairly selective in whom they send deals to (Investor 7).

> We are making sure that we look after the people who are referring to us. So, if someone refers a deal to you and then you don't (invest), so we try to reply, we do reply to everything referred. And we try to reply within 24 hours and give good reasons if we don't invest or don't meet, and to enhance the connection we make an extra effort with those top ones to really move fast (Investor 9).

In case a referee has personal experience of a VC's misconduct, it can immediately stop further cooperation with that VC. Misconduct can also lead to broader reputation damage for the VC. As one of the VCs had experienced:

> Venture is still a very small industry, and reputations can be earned and lost quite quickly within founders and VCs. […] We had a situation at our company, one of our founders was given a term sheet and they stopped talking to others then the term sheet was pulled later.

> And we'll never work with that fund again because of that. Referral network is hard to build and easy to destroy (Investor 5).

6.1.2.4 VC's Effort in Utilizing Network

Another attribute affecting the number of referrals a VC gets is the encouragement from the VC's side. The VC can ask for referrals, which ideally leads to the referee choosing that VC when they come across potential companies. Hence, VCs' effort in utilizing their network can increase the number of referrals. As two of the investors explained:

> I'm trying to get portfolio companies to refer deals to us. So, I ask them. If you don't ask, you don't get anything (Investor 10).

> We usually ask founders we interacted with, we're not systematic, but it's something I'd like to be systematic about which is, do you know 1 or 2 good founders that we should speak to, and we make sure that if you're free to make referrals (Investor 7).

6.1.2.5 Strength of Relationships

In addition to personal and fund brand, knowledge of the VC's focus, how VC treats referrals, and VC's effort in utilizing network, the strength of relationships also affects the choice of referral recipient. Unlike the other factors, the strength of relationships is a characteristic of a VC's network. Other referral network characteristics are presented in the next chapter, but since the strength of relationships affects the choice of referral recipient significantly, it is already presented here.

The personal relationship between the referee and the VC is the foundation of a quality referral. This relationship not only builds trust between the referee and the VC but also helps the referee to understand the specific focus of the VC. One key attribute in choosing a VC for whom to refer a case to is the strength of the relationship between the referee and the VC. The strength of the relationship between the referee affects both the quality and quantity of referrals. As several of the investors agreed:

> The relationships are really confidential. Otherwise, they wouldn't want to refer them. And they don't want to refer bad quality. They (relationships) are close and trustworthy (Investor 2).

> The more you work with the referees, the more they learn and understand what we're looking, which then increases the quality of the cases they refer (Investor 1).

> Even if they (referees) know three of us, there's usually one person that they feel closest to, and then they refer to that person (Investor 7).

The strength of a relationship is determined a lot by personal chemistry. Different VCs click naturally with different people, which affects the strength of their relationship. As the VCs explained:

> Sometimes the personal chemistry just does not work (Investor 1).

> Part of the reason we built it in the way we built it is, you know [gives an example of the difference between partners in the fund], right? We'll naturally network with quite a different ground (Investor 7).

Since the existing relationship plays a crucial role in referrals, VCs tend to form groups that they work with often. These clusters reinforce the effect of relationships on referrals since these groups share deals and invest together. As the investors explained their relationship with their co-investors:

> It's a relatively tight pack, there's some evolution, but it's pretty tight (Investor 9).

> When your network increases, you start have preferred partners you want to work with (Investor 1).

> Something to understand is sort of investing in tribes. You will find that people will very often collaborate with the same groups of people. So, they're very self-reinforcing. We do

a lot of our business and work with the same group of people on a regular basis. I think there's sort of natural families (Investor 7).

6.1.2.6 Conclusion on Factors Affecting the Choice of a Referral Recipient

In addition to the primary factors presented above, some referees also consider other factors that affect their choice of a referral recipient. There are also people who make referrals even though they do not know the VC that well. One of the investors interviewed mentioned that these weak referrals make around 25% of their deal flow. Some VCs segment these in the referral category next to warm referrals if they know the referee but not well, while other VCs associate these with cold contacts if they do not know the referee at all. Some referees also refer companies to all investors they know without putting much time or effort in considering the quality of the company or the fit with the VC. In this case, these low-quality referrals are also similar to cold contacts in their quality and relevance. As one investor explained the approach:

> Some people got a tendency to send in things that are pretty random, and we tune them down pretty fast (Investor 7).

Some people have a vested interest to refer companies to a particular VC. Venture partners and limited partners are the clearest examples of this group since they benefit directly if they bring quality investment targets for the VC firm. As one VC described:

> Our LPs first refer cases to us and ask if we're interested. Then they might take them to someone else (Investor 3).

When the referee or the founder makes the choice to which VC the company is referred to, there is usually more than one attribute that affects the decision. As one investor described:

> You know there's a lot of peeps that come across us first because of our content, and there are lots of people who when someone says "you should speak to [Investor 9's firm]". They're like "yeah, they're brilliant, I definitely want to speak to those guys because I've seen their content" but it's not only because of the content (Investor 9).

Hence the attributes mentioned above all affect the choice of whether the referee refers a company to a particular VC or not. VC firm and personal brand (driven by content creation, quality of interactions, and quality of work) and knowledge of VC's focus affect the decision. How VC treats referrals, the strength of the relationship between the referee and VC, the group of preferred partners, VC's encouragement for referrals, and possible vested interest also affect the choice of referral recipient. It depends on the referee which of the attributes have the largest weights. The different referee groups are not as clearly using different attributes in their choice of a particular VC as in their decision of making the referral in the first place. Also, whether the initiative for the referral comes from the founder or from the referee affects the importance of attributes: fundraising founders seeking for referrals tend to emphasize more the VC's brand, while referees also add weight on their relationship and past interactions with the VC.

6.2 Referral Network Characteristics

6.2.1 Importance of Referrals

To estimate the importance of referrals, interviewees were asked to estimate the share of deal flow from different sources (cold inbound, outbound, and referrals) and the share of investments from the same sources. Some of the VCs had exact data for both their deal flow and investment sources while some of the VCs estimated the ratios. For investments, several of the VC firm's latest investments were examined to confirm the accuracy of their estimation in case there was no exact data available. The figures presented in this chapter are therefore subject to estimation errors, especially in the share of deal flow from different sources section.

For Helsinki based VCs the share of referrals of deal flow ranged from 10% to 32% (with an average of 18%) while for London based VCs the referrals accounted for 40% to 70% (with an average of 56%) of deal flow. This result means that while referrals are an essential deal flow source in both regions, the London based VCs still source more than twice as many referrals (relative to their deal flow) than Helsinki based VCs. Since outbound accounts for roughly the same share of deal flow in both regions (23% in Helsinki and 22% in London), the smaller share of referrals in Helsinki is compensated with a higher share of cold inbound. In both regions, there were VC firms that had made several investments to deals originated from cold inbound. One of the Helsinki based investors explained that Finnish founders could find referrals more if they wanted to:

> The good founders we have invested in who approached us without a referral, they could have easily engineered a referral if they would have wanted to make a few phone calls. It's not that they couldn't do it (Investor 2).

At the same time, London based VCs estimated that deal sourcing is slightly harder on average than Helsinki based VCs. For London VCs the average answer was 5,75 to the question "How hard is deal sourcing on a scale from 1 to 10? (10 being really hard)" while Helsinki VCs had an average answer of 3,7. This difference can be at least partly explained by the higher share of referrals of deal flow in London, which requires more work to generate and maintain than cold inbound.

In both regions, the share of referrals increased significantly from deal flow to actual investments. This increase can be seen in Figure 9 below. For Helsinki based VCs, the increase was from 18% to 57%, meaning that the share of referrals more than tripled from deal flow to investments. For London based VCs the increase was from 56% to 85% meaning that the share of referrals increased by more than 50% from deal flow to investments even though they already accounted for more than half of the deal flow. This increase means that a referred company is three times more likely to receive an investment than a company coming from other sources in Helsinki. In London, a referred company enjoys a 50% higher likelihood of landing an investment.

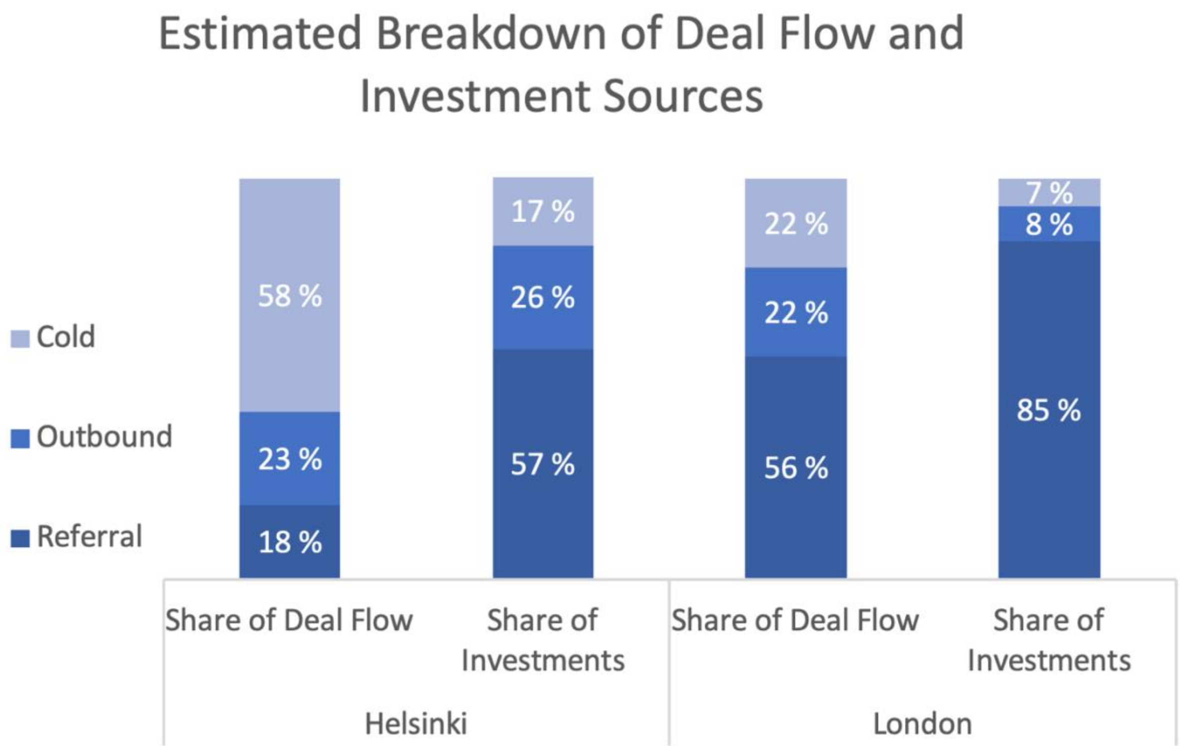

Figure 9: Breakdown of Deal Flow and Investment Sources for Interviewed VCs

Referrals not only account for a significant share of VCs' deal flow but more importantly, they are higher quality than cases coming from outbound or cold inbound since their relative share increases notably from deal flow to actual investments. As most of the investors agreed on how important referrals are as a deal flow source:

> It's critical (Investor 5).

> Because we do seed, you know if you look at later-stage funds it is going to be much more thematic and much more outbound. With us, that really doesn't work as well. It's too much of a needle in the haystack problem, which is why we rely on referral networks more than anything else (Investor 7).

> It's really important. You clearly see the difference in quality between unfiltered inbound and referrals. If the referee knows what they're doing, it's also easier to push the case forward and book the first meeting since you know that the probability of the case being interesting is higher (Investor 3).

> We rely quite heavily on the power of referrals and the deal flow that comes from our own network from people we know to be good entrepreneurs or good scientists (Investor 2).

Only one Helsinki based VC of the interviewees said that their VC firm's most important deal flow source is outbound, while all the others said referrals or a subgroup of referrals (other VCs for example) as their most important deal flow source. This same Helsinki based VC firm had only 10% of their deal flow from referrals (while the average was 37% for all VCs and 18% for Helsinki based) and was also the only one who mentioned that building brand is more important for them than building a network in terms of deal sourcing. The other investors either chose the network or equal importance with one exception choosing the personal brand of their team members as their priority improvement target.

6.2.2 Size and Activity of Referral Network

The activity of referees can be segmented roughly to three categories: exceptionally active referees refer 7 to 20 per year, the active ones 2 to 6 per year, and the occasional referees refer one every year or less.

Only two London based VCs mentioned the exceptionally active group (7-20 referrals per year). For them, it was not the most critical referral source, and it was a rather small subset of the referral network. As one of them explained:

> The 200 I mentioned are probably doing somewhere in the volume of 3 to 5 a year instead of doing dozens of cases a year. I think that's probably a much smaller group (who refers dozens of cases a year) and I don't think that's very powerful at all. Volume doesn't help (Investor 10).

The group of active referees (2-6 referrals per year) generates the majority of referrals for several of the VCs interviewed. As they explained:

> On a single VC, it is probably 2 to 3 to 4 a year. Somewhere around there. It's not 20 a year because they also want to be sensitive about what they share, what their reputation is as well (Investor 5).

> Some have never referred anything even though they've been in our portfolio for ten years. Then some refer like 6 per year, so every other month. I think that's the maximum, from 0 to every other month. The ones who would refer every month don't exist (Investor 2).

> A typical stream brings you 3 to 5 referrals a year, and there's plenty of them (Investor 1).

The size of the referral network varies significantly among the interviewees. The number of active referees who refer at least 2 cases per year ranges from 10 to 200 per VC firm. There is a quite equal distribution between three segments: 4 VCs estimated their firm has 10-50 active referees, 3 VCs estimated 50-100 active referees, and 4 VCs estimated 100-200 active referees. Only one of the VC firms with 10-50 active referees was London based, and only one of the VC firms with over 100 active referees was Helsinki based. This difference means that the higher share of referrals of deal flow in London compared to Helsinki is at least partly explained by a higher number of active referees and not necessarily so much by roughly the same number of referees being even more active in London.

The occasional referees (1 case per year or less) is also a significant group of referees. These referees can be people who are less actively coming across potential companies, or they can be referees who see many potential companies but have several VCs they selectively refer cases to. For some investors, this group is the most critical referral source instead of the active referees. As two of the investors explained:

> We have plenty of people who refer around one per year or the one they happen to know, but we don't have that many strong sources who we would talk with all the time and who would refer more. Perhaps for us, it's a larger crowd, and they refer less (per person) (Investor 8).

> That's probably about an order of magnitude 200 people in that pool, and we're probably seeing one or two deals from that pool per week. So, the average person in that pool is sending a deal every other year. How many of them are sending more than two (a year), 20 I guess (Investor 9).

6.2.3 Roles of Connections

The VCs interviewed had quite different referral networks not only in their size and importance but also in the composition of their referral network. For one VC firm, their founder network was the single most important deal flow source to which they relied on heavily. For three VC firms, the most important deal flow sources were a combination of VCs, angels, and other professionals. For one VC firm, the most important deal flow source was their outbound effort, while two others also mentioned it as one of their most important sources. The other six VCs mentioned combinations that included both their founder network and other investors (either VCs, angels or both) as their VC firm's most important deal flow sources. The three most important deal flow sources for the interviewees were other VCs, angel investors, and founders. Other professionals were also mentioned by 5 of the 11 VCs as one of the most important sources. Figure 10 below shows the number of mentions each source had.

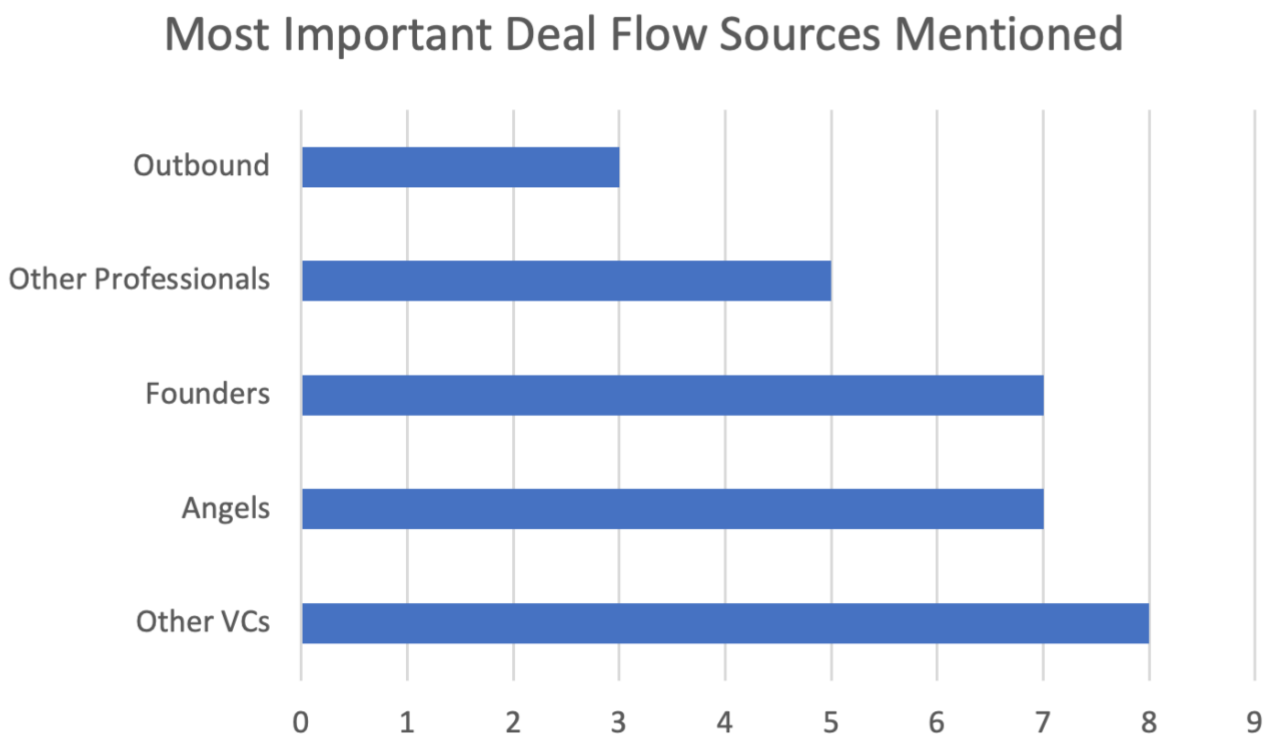

Figure 10: Most Important Deal Flow Sources for Interviewed VCs

Other VCs include existing investors, potential co-investors, and later-stage investors. For many of the interviewed VCs, the existing investors were less relevant since they invest at the seed stage when there are typically no investors or only some angel investors on board before them. For co-investors, the VCs had different approaches: some preferred to lead the cases, some preferred to co-invest with another lead, and some preferred to invest alone if possible. However, many of the VCs agreed that they have a dense group of preferred partners they tend to work with. These groups help to create personal relationships and higher trust among members. As two of the investors explained:

> Once you make a deal with some VC, you start to share cases much more actively. You're sitting on the same board with them, you build trust, and you know, then it's fun to work together (Investor 8).

> Something to understand is sort of investing in tribes. You will find that people will very often collaborate with the same groups of people. So, they're very self-reinforcing. We do

> a lot of our business and work with the same group of people on a regular basis. I think, there's sort of natural families (Investor 7).

Angels are also an important deal flow source for some VCs. Like other VCs, some of the angel investors also have their preferred partners that they like to work with. Angels also tend to refer cases that are quite early and not necessarily on the scope of many VCs yet. As the interviewees described:

> We rarely get referrals from other investors except for angel investors. They're quite an important source. However, other investors not so much since we invest so early (Investor 2).

> A number of them, I think, appreciate that we tend to treat the founders they send to us quite well, and not everybody does that in the market. So, your behavior towards the things that they refer is important in terms of keeping these kinds of referrals alive. So, some angels, for example, are not particularly fans of VCs and so they're fairly selective in whom they send deals to (Investor 7).

Founders are one of the three most important deal flow sources. With portfolio founders, the VC naturally forms a strong relationship with and, if the cooperation goes without significant problems, the founders tend to favor their investors when referring cases. As few of the interviewees explained:

> Best referrals come from portfolio companies. […] They know the investor, they can think if they would work well together, and founders spend time with other founders so they can complain about random stuff (Investor 6).

> Our most important deal flow source is our entrepreneurs. The work we do with them builds strong relationships between us (Investor 4).

For some VCs, their founder network includes not only their portfolio founders but also other founders they have formed relationships with. These can either be contacts from past work experience or then founders the VC has actively built contact with. As the interviewees gave examples:

> From my last fund [X] I get quite good proprietary deal flow from some of the founders there who don't really want to work with [X] ever again. That's a bit unusual, but I think it was a product of the challenge [X] was in. I've invested in a couple of companies so far out of the [X] founder network (Investor 10).

> We also find that the best referrals very often come from founders and some founders are really kind of central nodes I guess, both because of angel investment activity but also because of they just know a lot of people and they kind of decide to play that role. So, we make sure that we gradually find out who these founders are and that we build good relationships them so that we get the referrals (Investor 7).

> 85% (of referrals coming from founders) are from founders we've invested in, and 15% (of referrals coming from founders) are from other founders (Investor 2).

Almost half of the VCs (5 out of 11) mentioned other professionals than founders and investors as one of their most important deal flow sources. This group is very heterogenic, including university contacts, bankers, consultants, advisors, and large companies, for example. As the interviewees described:

> Service providers number three (of the most important deal flow sources), […] bank, lawyers actually not so much, lawyers are a resource in the US, but in Europe not so much. Then you know it's various consultants, board members, you know it becomes kind of all sorts after that, very much variety (Investor 7).

> So, 14% of deals closed were from brokers, so advisors, which is quite unusual I would say, quite high (Investor 10).

> We have a strong relationship with [name of the university], and we have actively built the relationship since they have a few professors with a good business mindset (Investor 2).

To sum it up, the composition of VCs' referral networks varies greatly among VC funds. Some rely almost solely on founders, while others get most of their referrals from VCs. Other VCs, founders, and angels are the most important referral sources in general, but other professionals are not far behind.

6.2.4 Centrality of Connections

The centrality of a VC's connections is a critical factor in determining the quality of their referral network. Even if a VC has a strong relationship with referees and there is a fair amount of them, it does not yet guarantee quality referral deal flow if the referees do not have a central role in their networks. The central actors in VC's network are most valuable in generating referrals. As the interviewees described:

> It's a market we haven't really thought about, but because we did a company that's quite high profile and doing well that leads the founder to getting asked making introductions (Investor 5).

> Some entrepreneurs are more connected than others. Some have never referred anything even though they've been in our portfolio for ten years. Then some refer like 6 per year, so every other month (Investor 2).

> Some founders are really kind of central nodes I guess, both because of angel investment activity but also because of they just know a lot of people and they kind of decide to play that role. So, we make sure that we gradually find out who these founders are and that we build good relationships them so that we get the referrals (Investor 7).

Founders are a good example of this centrality since many VCs have a strong relationship with their portfolio founders. However, there were still 4 out of 11 interviewees that did not mention founders as one of their most important deal flow sources. This can be explained by the lack of encouragement from the VC side, by the peripheral network position of some founders, and also by some VCs having relatively few portfolio founders. Two of the investors estimated how large share of their portfolio founders refers cases to them:

> Entrepreneurs are the most important deal flow source for us. […] From our founders around, 20% are active referees (Investor 2).

> If we have […] portfolio companies, I guess half of them introduces someone, so maybe it's […]. It's a quite small amount, but the referrals are then really good (Investor 8).

6.2.5 Referrals Are Tied to Individual VC's Network

One exciting aspect of referral networks is how strongly they are tied to an individual partner versus the whole VC firm. Since the basis of a referral network is the strong personal relationship between the referee and the VC, these referral networks seem to be quite partner-specific. When asked how partner-specific contacts their VC firm's active referees are, one of the investors answered:

> Oh very. So, we have some people that have introduced to both [name of other partner] and I systematically. Actually, […] and I have a fair amount of overlap. But I mean, I would say these referral networks tend to be partner-specific. They usually have one person that they like, even if they know three of us, there's usually one person that they feel closest to, and then they refer to that person (Investor 7).

Networks, in general, seemed to be quite partner-specific according to several interviewees. Several of the VCs also mentioned that their networks stayed with them when they switched VC firms. As two of the investors talked about their contact networks in general:

> 100% of your contacts follow you. They don't tend to be firm-specific (Investor 3).

> We have some overlap, but we've built on purpose so that we have our own contacts (Investor 4).

However, there is naturally much overlap in the networks of the partners even though these networks are based on personal relationships. For example, portfolio founders and LPs can be connections that several partners naturally share even though one of them typically has the strongest relationships with the person. As one firm that has a strong referral network of founders explained:

> The number of relevant referees is quite small, after all. It's not thousands or even hundreds. I would say that it (referral network) is actually more [name of the firm]-specific than partner-specific (Investor 2).

One of the VC firms interviewed wants to actively open up the networks of their partners so that they are not behind a single person in the VC firm. They had even created a travel policy to encourage not traveling alone to tackle the issue. They aim to secure smooth operations and handover of important relationships if something happens to for some of the partners. As the VC firm's partner explained:

> I have my own contacts, […] has his own contacts […]. So, we try to have two people traveling as often as possible (instead of one). If I get hit by a car, what happens then? There's always someone owning the relationship, but we try to get another person involved just in case. […] We made an official travel policy of it (Investor 1).

Some of the VCs emphasized their focus on this collective VC firm network even more. They still acknowledged that the relationships are personal and between individual people, but they are not restricted to a single person. As one of the interviewees described their approach:

> So, we try to think of ourselves as a single company with one network, so there's for sure a lot of overlap. And that's how we, it's important that everybody out there has more than one point of contact with [name of the firm]. So yeah, trying to think of it as one network (Investor 9).

An individual partner's connections are the basis of a referral network, but some VC firms actively avoid the formation of structural holes by having more than one partner establishing relationships with critical connections. This overlap of connections is natural in some parts of the network, such as portfolio founders, but in other parts, such as traveling together to meet advisors, it requires a significant investment of time. Strength of dyadic ties is also an essential characteristic of a VC's network, but since it was essential to cover already in the previous chapter when motives for choosing a specific VC were examined, it will not be repeated here.

6.3 Factors Affecting Referral Network

6.3.1 Previous Work Experience

All of the VCs interviewed had some relevant work experience before they joined or founded their current VC firm. For some VCs, connections made through previous work experienced or studies formed a significant part of their network. As one of them explained:

> If I think of the investments I just mentioned. […] was founded by […], who was one of the first employees for me at [Investor's previous company]. […] and […] I knew since they were entrepreneurs at the same time as me and [another partner in the fund]. […] Then if you think of […] the founder [X] was my friend from university. […] Then we invested in the company and [X] was also an advisor for a few […] companies, such as […] to which we invested. So, much of it (network) is created through working together (Investor 2).

The previous work experience of VCs also sets apart the referral networks of recently founded VC firms. Two of the relatively new VC firms interviewed had already extensive referral networks in place since they had formed a strong network before founding their VC firms. Two other relatively new VC firms had significantly smaller referral networks since their previous work experience was not as relevant or as extensive as their more networked VC peers' experience.

This previous work experience is also one of the main drivers of partner-specific networks in addition to partners focusing on different segments while working in their current VC firm. As one of the investors described:

> The other partner here at [name of the VC firm], he came from kind of like media and banking background, so it's much stronger network with larger corporate players in the industry as well. So, if you think about potential buyers of the industry there and also probably a stronger network here in the UK as well.
>
> *- So, the network is determined a lot by the previous experience of the partner?*

> Yes, previous experience, and then just where one desires to go and build it (Investor 5).

6.3.2 Investing and Working with Companies

VCs spend significant time and effort on investing in companies and helping these companies forward. The byproduct of this work is a variety of connections with founders, other investors, and other professionals. VCs often work closely with their portfolio companies, and this can help the VC to form strong relationships with the founders. As the investors explained:

> We actually believe that the best way to ensure good deal flow is to do quality work with the entrepreneurs every day (Investor 2).

> Founders want to work with people they can build a solid, strong peer relationship with. That's what they're increasingly looking for (Investor 10).

> We're on the board of their companies. We're in touch regularly with regards to performance of their companies. We invite them to [our] events, so we know them well. We have a lot of conversations with them that are not just about deal flow (Investor 9).

However, the relationship between the VC and founder can be quite intense, and it does not always work out well. In this case, the relationship will not stay strong, and the founder will not be interested in referring companies to the VC. As the investors described their experiences:

> Sometimes the personal chemistry just does not work. […] If you're the lead investor and chairman, sometimes bridges need to be burned (Investor 1).

> From my last fund [X] I get quite good proprietary deal flow from some of the founders there who don't really want to work with [X] ever again. That's a bit unusual, but I think it was a product of the challenge [X] was in. I've invested in a couple of companies so far out of the [X] founder network (Investor 10).

Many VCs work closely with other investors by sharing deals, co-investing, and serving on the same boards. This work is a convenient way to create a relationship between investors. As the interviewees confirmed:

> You really know someone when you've done an investment with them (Investor 5).

> It (referral network) develops in almost every seed case we syndicate. Every case creates a minimum of two new referral sources. […] co-investors see how we work, and they talk (Investor 1).

> Then other VCs similarly, you know, we're on panels with them the whole time, not only they refer deals to us, they invest in follow-on rounds to our portfolio companies, we're co-investors with many of them, and so we have a lot of ongoing conversations with them (Investor 9).

> It's a market we haven't really thought about but because we did a company that's quite high profile and […] we had a [local] co-investor. A fund that we co-invested with is now making introductions to us. You know it kind of grows from there (Investor 5).

VC often need to work with other professionals than founders and investors to get their job done. These other professionals can be, for example, lawyers who set up the paperwork for VC's investment, other board members, consultants, and bankers. Working with them also builds VCs network as one investor bluntly put it:

> I also have quite many advisors in my network since I've been working a lot with them (Investor 1).

6.3.3 Building and Maintaining a Network

VCs use many of the same methods for building a referral network and maintaining it. These two activities are very much intertwined. However, the goals of building a referral network and maintaining it are different. When VCs are building their referral network, they aim to identify key people and form connections to these people while when maintaining it, the focus is on strengthening existing relationships and sometimes ending them.

Building a strong network is one of the critical activities seed stage investors do. VC's network has several other functions in addition to getting referrals, such as recruiting talent, getting advice, and acquiring clients. Many of the VCs used quite calculative approaches in building their networks, which is understandable since it is crucial for the success of their VC firm. The goal is to have strong connections to the most relevant and central players in the ecosystem. As two of the VCs explained their approach:

> We cannot network with everybody, right, so we're really quite selective around making sure we network with the best to the extent we can. And so, going through quite hard the people who we think are credible and should be. Because our network is a reflection of us (Investor 7).

> You need to constantly work with better entrepreneurs since A level people refer A level companies and B level people refer B level companies and so on. You need to constantly raise the bar for the entrepreneurs, for the co-investors, for the advisors, and for the board members, you work with (Investor 2).

However, not all VCs see network building as calculative, even though they might do it very actively. As one VC described their approach in nurturing their relationship with critical referees:

> Making random introductions, sharing deals with them occasionally as well if they're investors, just having a good time when we're around each other, see each other in events or drinks. I mean it's more organic, I wouldn't say it's a very calculated program of building out the referees (Investor 10).

Maintaining a well-functioning referral network often requires active effort from the VC. If the VC does not meet a founder or a fellow investor regularly in board meetings, for example, they need to separately put the effort in maintaining relationships with them. As the investors agreed with almost the same words:

> You constantly have to refresh your network, meet the new entrants, and keep it very much alive (Investor 7).

> You have to constantly refresh and add to it. You can't just sit back and wait. You have to constantly push people on it (Investor 5).

> The face to face is important to reignite because you kind of have to make sure you stay a little bit top of mind. I would say it's quite variable, some people will systematically think of us, and some will stop if we haven't seen them for a while, and other people it's like meet, trigger, and they're like "Oh, by the way, we're looking at x." And I think it's actually quite important to be continuously in the flow because you know they might meet another VC with before. Maintaining these relationships is fairly important (Investor 7).

How do VCs then build and maintain these referral networks? The four key drivers identified from the interviews for building and maintaining referral networks are (1) attending and hosting events, (2) having regular catch-ups, (3) crearing structured programs, and (4) doing ecosystem work.

6.3.3.1 Attending and Hosting Events

Most of the VCs interviewed spend a significant amount of time attending and hosting events. Events offer a convenient way to meet existing and new contacts. There is also the element of serendipity in events which helps VCs to form new connections outside their social groups. As several of them described:

> It's actually through a lot the social events. Because it's not just about being a face on a website or on an email address, you know the personal side of it, so it's through Slush, you know when we come up to Helsinki, we schedule 10 meetings a day with different groups (Investor 5).

> The more you have time to attend events, the better. You not only meet several teams but also connections who are important in terms of deal flow (Investor 4).

> We're constantly networking with each other, so this is an industry where, I mean that's actually a big part of what we do, right, events, and conferences (Investor 7).

Many of the VCs also regularly host events to build and maintain their network. Hosting events naturally gives them the power to curate the attendee list as they wish and invite people whom they want to strengthen their relationship with. As the investors explained:

> We run small scale events, and we make sure they (most important referral sources) are invited, and they'll meet interesting people. So, I'll think one of the things we try to do when we find great people is to constantly expand our organic network just by helping them making connections (Investor 7).

> We've hosted quite many events. We try to provide them (deal flow contacts) value before (they start referring) so that they know us and how we operate. It's good if they know us well since it increases the likelihood that they'll refer cases to us (Investor 8).

6.3.3.2 Regular Catch-ups

VCs also have regular catch-ups with their most important contacts. These catch-ups strengthen the network of preferred partners VCs tend to work with most often. Catch-ups also offer a way to strengthen the relationship with critical contacts actively. If a VC fails to create a habit of catching up with relevant contacts, there is a high risk that the connections start to fade away, and the VC's position in their network becomes more peripheral. As several of the VCs explained how to maintain their relationships with the most important referees:

> Meet with key folks regularly, talk by phone, share ideas regularly by email (Investor 11).

> We have a program where we look into certain important funds that we haven't met recently, and if that's the case, then we'll reach out for them and go for coffee or breakfast. So, we have a systematic program to make sure that these contacts aren't getting cold (Investor 9).

> We track our interactions with the key angels in each of our markets, make sure we know them, that we meet them regularly, because it is not sufficient to have contact you also have to stay top of mind, so there's a method around making sure that we stay in touch with the key angels (Investor 7).

6.3.3.3 Structured Programs

Some VCs have created structured programs to facilitate their network-building efforts in some specific segments. The common theme in the programs is to provide value for the participants, and if they get to benefit from the program, they are more likely to form a strong relationship with the VC which can lead to referrals. Deal flow generation is not necessarily the primary goal of the structured programs VCs have created, but for some programs it is. As one interviewee explained their angel engagement program to increase referrals:

> The other way is through a more structured angel engagement program. When we've invested in a company, there would have been 4, 5, or 6 angels within that company already and so we bring that group together for dinner. We encourage, we help them keep up to date with the company as well because we've found that companies do quite bad job with that. We force that the company has to have a shareholder meeting once a year, so angels plus any investor get together […] we couple of times a month share what we think are very interesting angel opportunities through them. So right now, we use Slack, but we're looking at building our own platform as well. And that's kind of to make them to remember who we are and prove we can be helpful, valuable partners […]. On top of that […] we volunteer that every time they make an investment, the angels who are in our network, we will meet the company early, not about fundraising, but about helping the company think through what it takes to get series A. […] It's meant to be quite early after an angel investment, so there's no actual fundraising quest, they're not actually pitching yet. But it's all about just trying to prove to the angels that we can be valuable and so when that company or any company, is time to fundraise they come to us (Investor 5).

Some of the interviewees had also created different community programs that were aiming to build, maintain, and activate their network. For many VC firms, it is still early days to estimate the success of these programs, but they have helped VCs to find new investments, recruit talent, and build mindshare with their network already.

6.3.3.4 Ecosystem Work

Many VCs also devote their time and effort to help to create a more thriving startup ecosystem in general. This ecosystem work can be a goal in itself for many of the players in the ecosystem, but it is often also a convenient way to strengthen the VC's network. Helping to build the local startup ecosystem improves VC's personal reputation, builds their network, and gives them direct access to deal flow as well. However, often, the ecosystem work has no immediate payback even though it is often beneficial in the long-run. As the investors explained:

> There's karma which is, in other words, your willingness to give time to the ecosystem and to generally be helpful and the kind of reputation developed with that (Investor 7).

> For example, with accelerators and conferences, we get a list (of startups). We might evaluate the startups or do some other work for it. We go there to mentor startups, to give a talk. We give value, and they give something back. It's hard to build a lasting relationship if you always ask for the list but never give anything back (Investor 6).

> Then there's the ecosystem work. You're a mentor at Startup Sauna. […] You're sparring a lot of different teams, so you meet a lot of new people, and then some of them might interest you as an investment target (Investor 2).

6.3.4 Reciprocity

Referrals can often create expectations for reciprocity. VCs who have a large and well-functioning pool of referees give value back even if they do not necessarily think of it as reciprocity. The role of a referee affects the need and method for reciprocity. If the referee is a portfolio founder, then the VC does not necessarily need to do anything separate since the portfolio founder might already receive a fair amount of help from the VC. However, if the referee is another VC, the relationship often requires more explicit reciprocity to be mutually beneficial in the long-term. If the referee has a financial incentive in the referral, the need for reciprocity is lower.

The most common ways to give value back are sharing cases with the referee (if the referee is also an investor), making introductions for the referee, inviting them to events, and just generally being helpful in case there is something the referee might need from the VC. As VCs explained their approach to making favors for their referees:

> Yes, we have to. So, we definitely do that (refer cases back to them), we know it has to be a two-way relationship so, we try to, for example, if we receive something in Finland we always think which Finnish fund it would make the most sense to share with (Investor 5).

> So, we always offer and try to plan things that are relevant for them. We've had many cases where people will do us 4, 5 intros and then we literally go out of our way so that we can say; we want to intro you to potential investors, board members whatever it may be and make an action point to return the favor (Investor 7).

7 Discussion

7.1 VC Referral Flow Generation

Previous work experience, investing and working with companies, and building and maintaining a network all affect VC's network directly. Additionally, reciprocity feeds into maintaining a network and through that to VC's network as well. Referral network's main characteristics are (1) size and activity of referral network, (2) centrality and role of connections, and (3) strength of relationships with the connections. This network is the primary source of referrals for VCs, and fostering it is vital for receiving quality referral deal flow. Some VCs put a very active effort in fostering this network, some can take care of it automatically through working with founders, and some are neglecting it with the cost of losing high-quality referral deal flow.

From VC's referral network, individual referrals are driven by different motives: financial, seeking co-investor, creating future investment opportunities, or just generally being willing to help with the possible expectation of future reciprocity. Personal brand, fund brand, and knowledge of the VC's focus highly affect referral generation from VC's network while creating some referral flow directly as well. Additionally, VC's effort in utilizing the referral network affects referral generation. Some VCs understand to actively encourage referrals, while several VCs seem to be overlooking this rather straight-forward approach in improving their referral flow quantity. Also, how VC treats referrals affects both the generation of referrals from VC's network, but also the network itself through the building and maintaining of network factor. Like VCs operational excellence, also their treatment towards referrals and especially their urgency of replying to them varies significantly among VCs. The challenge for VCs is that the feedback loop of treating a referral from an occasional referee is quite long and might only affect VC's referrals next year or the year after that. Even then, the VC might only miss one or two referrals. Additionally, since the pool of occasional referees is often large, the VC might not even realize if they start losing these referees slowly. Several of the attributes in this process also affect VC's deal flow outside of referrals. Especially personal brand, personal reputation, and fund brand are strong drivers of cold inbound while attending and hosting events tend to generate outbound deal flow. Figure 11 below summarizes the relationships between the key findings of the study and shows how the attributes affect the generation of referral deal flow for VCs.

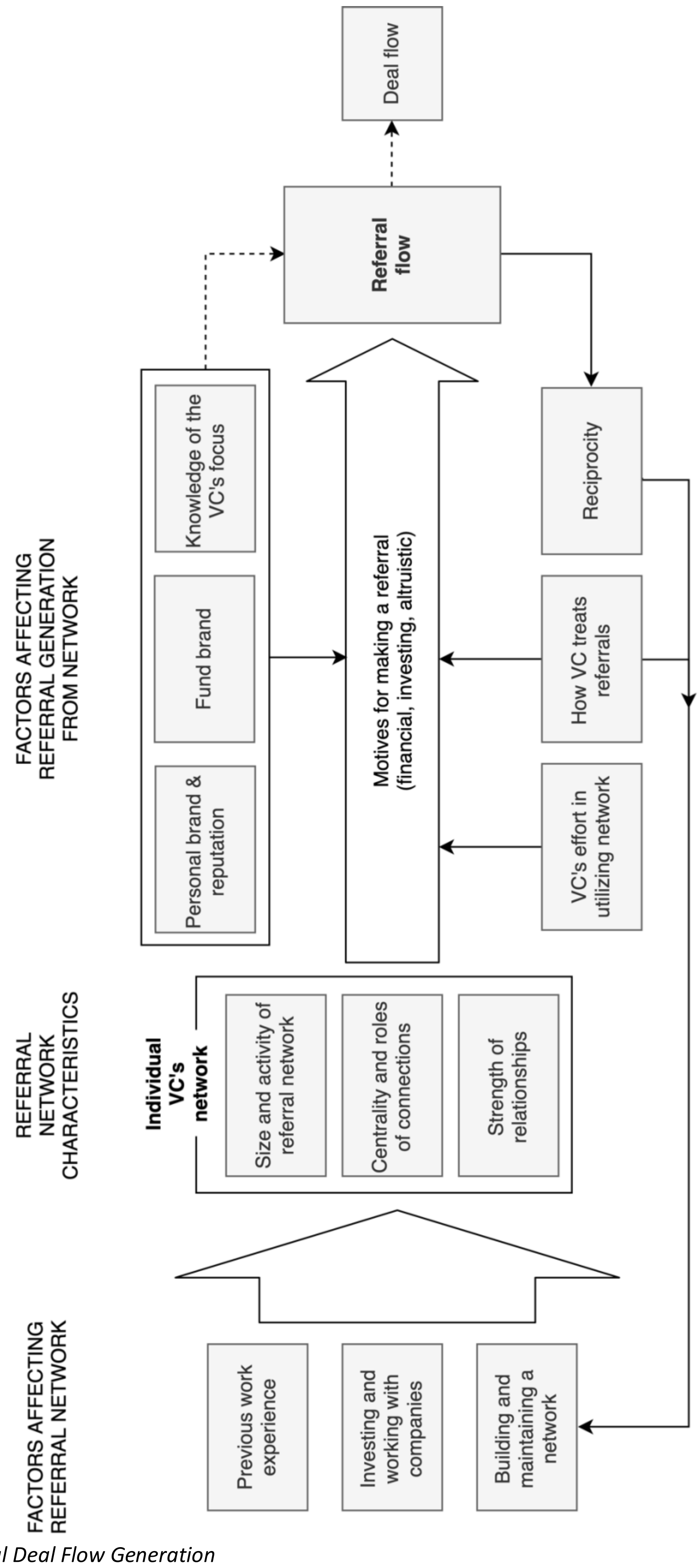

Figure 11: VC's Referral Deal Flow Generation

7.2 Theoretical Implications

This study aimed to form a general view of referral networks in venture capital, starting to bridge a significant research gap in academia. The emphasis was on understanding the motives for making referrals, motives for choosing which VC to refer cases to, identifying and preliminary quantifying the main characteristics of referral networks, discovering the main factors affecting VCs' referral network and proposing causal relationships among the findings.

The first and most notable contribution of this study to academia is the identification and high-level explanation of referral networks in venture capital. So far, the literature has examined referrals in venture capital mostly on a merely dyadic-level (Batjargal, 2007; Fiet, 1995; Maula, 2001; Reuber & Fischer, 2005; Roberts, 1991; Sorenson & Stuart, 2001) or by quantifying referrals share of deal flow (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984) without forming a general understanding of the phenomenon on a network level. This study contributes to the necessary foundation of understanding the phenomenon more comprehensively in addition to examining discrete parts of it separately.

Second, this study also identifies the motives for making referrals, motives for choosing which VC to refer cases to, the main characteristics of referral networks, and the main factors affecting VCs' referral networks. While these are results from only 11 interviews, they help to guide further qualitative research in finding more attributes and also provide hypotheses for quantitative research to test statistically.

The third contribution is the proposal of VC referral flow generation (Figure 11), which suggests causal relationships among the found key attributes and how they act together to generate referral deal flow. Several of these relationships have been previously acknowledged in the literature, such as previous work experience affecting VCs network (Hsu, 2007) but this is among the first attempts to acknowledge all the main drivers and include them in a single model. This model can provide a starting point for both iterating the referral flow generation further, but also to test its applicability to other industries beyond venture capital.

Many of the findings of the study have not been covered in existing literature, but some findings overlap with previous studies. In previous studies the referrals share of total deal flow was between 39% and 78% of VCs' deal flow on average (British Business Bank, 2019; Gompers et al., 2016; Roberts, 1991; Tyebjee & Bruno, 1984). In this study, the corresponding share was 37% on average (18% for Helsinki and 56% for London) presenting the fourth contribution. So, while the results are in line with previous studies, this study highlights the need to include a regional perspective in referral research, since there seem to be quite substantial local differences.

Batjargal (2007) showed that a stronger tie between referee and VC, a stronger tie between referee and entrepreneur, and higher mutual trust among referee and VC make the referral stronger and investment more likely. The fifth contribution is the confirmation of that finding. Several of the interviewees highlighted the importance of high trust and close relationships that they have with their most active referees. Additionally, they also mentioned, how initially the referrals might not be relevant, but once the referee understands better what the VC is looking for and the relationship strengthens the referrals also improve. According to the interviewees, trust also played a role when referees choose to whom they refer companies to. This trust ties directly to how VC treats referrals, which can be seen as one of the drivers of trust.

The sixth contribution is the finding that how VCs treat referrals affects referral generation. When referees make referrals, they do not only vouch for the company to the VC, but they also vouch for the VC to the company. This is especially the case when the referee makes the decision to whom the company is referred to instead of the founder actively seeking a referral to a specific VC. With this in mind, referees have little incentive in choosing a VC with long response time or otherwise sub-optimal behavior if they also have a connection to VCs with more streamlined operations. However, if the VC can provide value for the founder even when not investing, the foundation for a flourishing relationship is set. Additionally, this trust is also needed for the anticipation of future reciprocity. If a VC is not trustworthy, then the referee would have a lower expectation for that VC providing value back as well. This trust is perhaps best captured in the VC's personal brand and fund brand. As one of the interviewees explained, once a fellow VCs acted untrustworthily, they immediately stopped referring companies to them and cooperating with them in general. The relationships with referrals are in some respects very similar to other relationships: trust is needed for optimal information flow, strong relationship helps to understand others' wishes and expectations, and the building of a flourishing relationship takes time while it can be destroyed very rapidly by acting untrustworthy.

Several of the interviewees said that multiple of their investments had been sourced through connections made at previous workplaces. The seventh contribution is confirming that previous work experience has a significant effect on personal networks, as mentioned by Hsu (2007), and especially on referral networks.

The eighth contribution is the finding that central VCs often seek to form ties with other central players. The VCs who mentioned that they actively seek to network with the most relevant people or with the most connected people were also the ones who had most extensive referral networks. This finding corresponds to Gulati & Gargiulo's (1999) previous finding that actors with central positions tend to form relationships with actors holding at least as central positions instead of peripheral players. One possible contributor to this effect is that central VCs understand the benefit of their central position and want to work on improving it, while more peripheral VCs either do not understand what they are missing out or are hesitant about their abilities to increase their relational network position.

Ferrary (2003) highlights the importance of gift exchange in transactions between VCs. This study's finding on reciprocity builds on that theory of gift exchange presenting the ninth contribution. While VCs had slightly different approached for reciprocity and its importance, most of them agreed that there needs to be a mutually beneficial relationship. Many of the VCs saw referrals as a way to gain social capital, which they need to repay at some point for the referee. The VCs who had most extensive referral networks (excluding their own portfolio companies) seemed to be among the most eager to pay back this social capital. On the other hand, some VCs, whose most active referees were other VCs, saw referrals almost as a barter deal in which the favor to be returned (referring companies back) was already determined, but its timing was just uncertain. This barter mentality seemed to apply to same-stage VCs, later-stage VCs and also to angel investors.

The tenth contribution is the identification of regional differences in referral networks. Among the interviewees, Helsinki based VCs had a significantly lower share of referrals of deal flow than their

London based peers, which leads to a proposition that in a larger and more competitive market, the role of referral networks is more crucial than in a small market. Several reasons could be behind this higher share of referrals in London. One possible reason is that since the startup ecosystem in London is more mature compared to Helsinki, founders in the London area are more up to speed with the industry best practice of getting a referral instead of approaching VCs cold. Additionally, since there are so many more founders in London than in the Helsinki area, founders need referrals to stand out from the masses more than they do in Helsinki. Regardless of the exact mechanism, this result supports the finding of Wright & Robbie (1998) that in more competitive environments, VCs need to put more effort in outbound and proactive referral generation while they can rely less on cold contacts. This finding also indicates that the significance of referral networks will only increase as the venture capital industry matures and gets more competitive.

The eleventh contribution is recognizing the differences in the relative importance of active and occasional referees between VC funds. Most of the interviewed VC's had both occasional and active referees while their importance varied between the funds. VCs who rely more on active referees get them typically from a smaller referral network with strong ties, while occasional referees are generated from a more extensive referral network with weak and strong ties. Active referees often have strong ties with the VC, since their activity makes the interactions with the VC more frequent and the relationship stronger. Also, as several of the interviewees said, the referees sending non-relevant referrals are either tuned down or coached to understand the VC's focus better. This coaching can also strengthen the relationship with the referees who remain active. Since maintaining a strong relationship takes more resources than maintaining a weak relationship, the possible number of strong relationships is smaller than that of weak ones (Fliaster & Spiess, 2008).

The twelfth contribution is proposing (1) the importance of weak ties and structural holes in achieving proprietary deal flow, and (2) that optimal group performance can be achieved by having strong ties and network closure within the group of preferred partners. Applying the strength of weak ties argument (Granovetter, 1973) to referral networks, VCs should get more proprietary cases through weak ties instead of strong ones. Strong tie with the referee would mean that the referee is likely to have ties to other VCs following Granovetter's logic. If the referee knows several VCs, the likelihood of them referring something to only one VC is smaller than if the referee only knows one VC. Also, building on the finding of Heuven & Groen (2012) that entrepreneurs with closed networks should aim to increase structural holes in their networks, the same advice could apply to VCs as well. Network rich in structural holes would be ideal also for VCs since it increases their control, power and network size which helps them to identify more investing opportunities directly and through referrals, since they have access to several network clusters instead of seeing the same deals that most VCs in their cluster see. Hence, structural holes could also help VCs to gain proprietary deal flow, meaning that they are the only, or at least one of the first VCs, to see a potential case.

The aggregate network of a VC firm can further be optimized by avoiding excessive overlap in partner networks so that the VC firm as a whole has a broader network and more central position. As Burt (2001) suggested, the optimal group performance could be achieved by having high network closure within the group and having many structural holes outside the group boundaries. In the venture capital context, this would mean having a group of preferred partners with strong connections, and then on top of that having as many connections to different clusters as possible through structural holes.

With this logic, VCs should aim to form ties to several clusters that are unknown to other VCs. In practice, it can be hard, if not impossible, to find relevant network clusters that other VCs have not formed ties to. VC networks seem to generally be closed because of small industry size and required trust, limiting the possibility of forming ties to relevant actors not connected to competitors (Coleman, 1988). VC could aim to have the strongest relationship of all VCs with a referee they deem essential. Hence, if the referee is relevant and in a separate cluster contradicting the argument of closed VC networks, the VC can win the referrals of that person by a weak-tie since the referee has no other alternative recipients for referrals. If, however, the referee has a relationship with several VCs, which would be the typical case and support the closed VC networks argument, the VC would need to have a strong tie with the referee to appear as the most feasible recipient for referrals. As a simplified hypothesis, VC networks could be closed locally and open globally, meaning that most VCs in the same region know each other on a personal level while they might not know all the VCs on the other side of the continent.

The thirteenth contribution is proposing that optimal referral networks have both active and occasional referees, and the referees are not only from a single group, such as other VCs. The optimal referral network should include both active and occasional referees if one assumes decreasing marginal utility from both building ties to active referees and building ties to occasional referees. The assumption is that VC has no inherent reason for preferring one over the other. VCs, however, have many other objectives than building a strong referral network, which means that they might end up building a sub-optimal network from a referral perspective, while it is the rational choice considering all objectives. That being said, since many VCs put a significant amount of effort in building and maintaining their deal flow, there could be room for optimization by building ties to at least some amount of both active and occasional referees.

This argument could be argued against by saying that VCs without top-tier brands might not have the possibility to win over the active referees in a competitive market. Additionally, the VCs with top-tier brands should focus their efforts towards active referees instead of occasional ones. To answer the first argument, VCs without top-tier brands should, for that exact reason aim to form ties with the active referees to improve their brand instead of settling for their peripheral position. For top-tier VCs, the marginal utility of forming ties to occasional referees would likely be higher after the active referees are won over.

This same decreasing marginal utility could also apply to different referral groups: there are only so many VCs that can co-invest together and if the VC has put significant effort in building a high-quality group of preferred syndication partners, maintaining that group could free some time for building referral network in other areas, such as advisors, with higher marginal utility.

The fourteenth and final contribution is acknowledging that referrals can decrease diversity in companies funded if the VC firm’s partners are homogeneous. Since most VCs, like most people, more easily network with similar people like themselves, they also tend to form most and strongest connections to people like themselves (Fliaster & Spiess, 2008). Since a significant share of VCs deal flow, and even more significant share of investments, comes from referrals, this can decrease the diversity of founders VCs invest in. One of the interviewees who relied strongly on referrals used to have a basis that they only invest in founders whom they know or whom someone from their existing network knows. From the viewpoint that the industry is small and based on trust, this is a reasonable approach. Additionally, they also had made investments to several companies who had approached them cold. However, another VC who also relied heavily on referrals had taken a different approach. The partner interviewed said that it is vital to be open to making investments from cold inbound for the explicit reason of promoting diversity within the startup ecosystem, and hence, they take it very seriously. It is essential for VCs to acknowledge their referral network's possible tendency to decrease diversity and consider if there could be actions taken to get referrals with a more diverse set of founders. Here, a network rich in structural holes can help to bridge the gap between different network clusters and not only improve diversity but also improve the quantity of high-quality deal flow the VC receives. Additionally, the diversity of the partners in the VC firm can help the firm to have a collective network more abundant in structural holes and source referrals from a larger pool of referees.

7.3 Managerial Implications

This study has several implications for VCs. First, for VCs who are less actively developing their referral networks, this study can help to understand the importance of referral networks in the industry in general and provide another viewpoint to the decision whether it is worth investing time and effort or not. The recommendation would be to spend at least some time explicitly developing and maintaining the referral network.

Second, the findings of this research show how referral networks work on a high-level. It gives VCs a quick overview of what motivates the referees to make referrals, what are the motives for choosing to which VCs to refer companies, what are the main characteristics of a referral network, and what factors VCs can leverage to improve their referral networks. For VCs who want to develop their referral networks actively, this study gives a checklist on things they can think of when developing their strategy for leveraging referrals.

Third, this study encourages VCs to track their deal flow accurately. VCs who make decisions based on estimations of their deal flow instead of accurate data are putting themselves in a disadvantaged position compared to VCs who are up to speed on their deal flow sources. VCs can then measure their referral networks as well and make data-driven decisions on how to improve it. These improvements can be simple actions, such as mapping the most critical referees and creating a structure on maintaining strong relationships with them. Also, it can show if some of the potential referral cohorts are underrepresented. There can naturally be valid reasons for skewed referral cohorts. For example, a new VC fund will have fewer referrals from their portfolio founders since there are fewer of them. However, it can also highlight segments that could potentially be more active with relatively small effort.

Fourth, there are several low-hanging fruits for improving referral networks identified in this study. VCs should consider encouraging referrals from their close contacts, especially portfolio founders, who might be able to make referrals but are not necessarily actively aware of the possibility or benefit of making them. VCs need to treat referrals well to ensure selective referral sources are willing to refer companies in the future as well. VCs should also pay attention to returning favors for referees, especially outside their portfolio, to maintain a mutually beneficial relationship. VCs can also start building social capital by making referrals and introductions proactively, which will likely lead to an increase in referral deal flow.

For founders, the message is straightforward: get a referral to a VC instead of approaching cold. Ideally, search a person you and the VC have a strong relationship with. Strong relationship increases the referee's willingness to refer your company, the likelihood of the referral being relevant, and the VC's attention to your company. Having a direct tie to the VC will also do the trick. To find referees to VCs, founders should aim to have a network rich in structural holes, meaning that they are connected to a broad variety of different network clusters.

8 Conclusions

The main objective of this study is to understand referral networks in venture capital deal sourcing, which was tackled with the main research question: How is VCs' referral deal flow generated? Several sub-questions were used to guide the answering of the research question. These sub-questions covered understanding motives for making referrals, motives for choosing a referral recipient, the importance of referrals and their share of investments, main characteristics of referral networks, and factors affecting VCs' referral networks.

VCs receive a remarkable share of their deal flow from referrals and are significantly more likely to invest in referred companies compared to companies sourced via other means. Referrals in venture capital have, so far, received only limited attention in the literature. Previous studies have either focused on dyadic ties of the referee or the number of referrals ignoring a comprehensive overview of the phenomenon. In addition to academia not providing a comprehensive view of referrals, the practitioners are also keen to know more. Many VCs rely heavily on referral networks and are highly curious about the industry best-practices.

This study answers the research question from several perspectives with the help of the sub-questions. First, the referral flow generation is a dynamic process. VCs have several factors they can leverage to improve their referral networks, which are the primary source of referrals. The referees in the network have different motives and their decision to make a referral is affected by factors such as VC's brand, referee's knowledge, and VC's effort. Additionally, the referral flow generated from this network also creates reciprocity to the referees, which eventually affects the VC's network.

Second, this study identifies the main motives for making referrals. Brokers and fundraising consultants have a direct financial incentive to fundraise, existing investors and other shareholders have a financial incentive in the company's success, and limited partners and venture partners have financial incentives in the VC's success. Potential co-investors want to validate the company and find suitable co-investors, later-stage investors want to create a future option to invest in the company, and other founders and friends of the founder are driven by general willingness to help with the possibility of future reciprocity. The referee can be also be driven by various motives simultaneously, and the motives mentioned above tend to be the most common motives for each group even though they might not always hold.

Third, the motives for choosing which VC a company is referred to are identified. VC firm and personal brand (driven by content creation, quality of interactions, and quality of work) and knowledge of VC's focus affect the decision. How VC treats referrals, the strength of the relationship between the referee and VC, the group of preferred partners, VC's encouragement for referrals, and possible vested interest also affect the choice of referral recipient. Fundraising founders seeking referrals tend to emphasize more the VC's brand, while referees also add weight on their relationship and past interactions with the VC. However, in general, the different referee groups do not use distinctively different attributes in their choice of referral recipient.

Fourth, the importance of referrals for VCs is emphasized with the findings. Referrals not only account for a significant share of deal flow (in Helsinki around 20% and in London almost 60% of deal flow) but their relative share increases drastically from deal flow to investments. In Helsinki, a referred company is three times more likely to get investment than a company sourced via other means, while in London a referred company enjoys a 50% better chance of being invested in. Hence, referrals not only account for a significant share of deal flow, but they are drastically better quality than other deal flow sources on average. Several VCs mentioned that referral deal flow is critical for their success.

Fifth, the main characteristics of referral networks are identified and compared among the interviewees. The number of active referees (2-7 referrals per year) ranges from 10 to 200 among the VC firms interviewed, and many have a large group of occasional referees (1 or fewer referrals per year). The most important deal flow sources were other VCs, founders, and angels, while several funds also mentioned other professionals as one of the most important sources. The centrality of VC's connections affects the quality of their referral network. More central actors are more valuable in generating referrals, and VCs had a significantly different number of central referees in their networks. Additionally, the strength of relationships with connections affect the VC's network heavily. The referral network is also tied more closely to an individual partner instead of the whole VC firm.

Sixth, the main factors VCs can leverage to affect their referral networks are previous work experience, investing and working with companies, building and maintaining a network, and being reciprocal. Some VCs have a significant advantage since their inception due to the networks the founding partners have gained from their previous work experiences. VCs can also form plenty of strong relationships by conducting their bread and butter business of investing in and working with portfolio companies. Many VCs also spend a significant amount of time, explicitly building and maintaining their referral networks. The main tools VCs use for building and maintaining referral networks are attending and hosting events; having catch-ups with critical connections; creating structured programs, for example, to angel investors they want to keep close; and by engaging in ecosystem work. Most of the VCs return favors for their active referees, while some put significant effort into being reciprocal and taking good care of their most essential referees. Reciprocity can also be seen as a way to build and maintain a network since it affects VC's network in the long-run.

The main theoretical contributions of the study are identification and explanation of referral networks in venture capital, which includes identifying the motives for referrals, the main characteristics of referral networks, and the factors affecting these networks. Additionally, the dynamic relationships between the identified attributes are proposed as a model of VC referral flow generation. For VCs, this study highlights the importance of referrals, gives an overview of how referral deal flow is generated and how it can be improved, and encourages to track referrals and deal flow in general accurately. For entrepreneurs, this study recommends finding referrals to VCs instead of approaching them cold.

This qualitative case study has some limitations that are important to acknowledge. First, it is worth noticing that VCs and VC firms can have unique strategies, and the findings of this study are based on the subjective views of the interviewed VCs and, therefore, not necessarily cover the whole range of potential approaches to referral networks that VCs might have. Hence, with a different set of interviewees, who emphasize different aspects of referral networks, different attributes or a different segmentation of the attributes could be derived. For example, the identified attributes that affect referral generation from a VC's network are not collectively exhaustive nor independent. Several other attributes, perhaps with a smaller effect that affect referral generation could be found. Personal brand, fund brand, and how VC treats referrals are examples of attributes that all affect referral generation, but that are also interdependent. Hence, a different segmentation of these attributes could also be argued for. In general, the challenge of studying a social phenomenon is that all attributes that affect the phenomenon are almost impossible to identify and the found attributes and their relative effect can be subject to interpretation. This study acknowledges these limitations and aims to make the process of deriving findings from data as transparent as possible with the Gioia method (Gioia et al., 2013).

The second limitation is that this study examined the referral network only through the lens of a VC, excluding the perspective of the referee (although the interviewed VCs did explain how they make referrals) and the referred person. Hence, most of the findings for motives of making referrals are second-hand knowledge or VCs' conclusions instead of first-hand knowledge directly from the referees.

The third limitation is that the findings of the study are not inevitably generalizable to other geographies or to other stages of venture capital beyond what was covered. Also, the proposed associations and causalities between the findings are simplified and do not necessarily cover all the nuances of the studied phenomenon, nor are they necessarily applicable to other contexts. These limitations are caused by the limitations of qualitative case study research.

The fourth and last limitation is that only some of the VCs had actual data of their deal sources, and the other VCs estimated the share of referrals of their deal flow. This estimation is subject to recall bias, and since referrals could be easier to remember than cold inbound cases, this might skew the results in favor of referrals. If this is the case, then the importance of referrals could be argued to be even more significant, since their share would increase even more drastically from deal flow to actual investments. Additionally, due to the qualitative and inductive nature of the research, personal experiences, personality, and expectations for the study (both acknowledged and unacknowledged) could have affected the process of conducting the research producing different findings than another researcher might have concluded. This risk was limited using qualitative rigor in constructing the main findings of the study. Also, a diverse set of partners from VC funds were selected to be interviewed to minimize subjective conclusions and to guarantee the reliability of the study.

Future studies could be continued to several exciting avenues. First, including the perspective of referees and referred entrepreneurs would be an essential addition. Second, since this study had a qualitative approach in understanding referral networks, future studies could cover the findings of this study with quantitative methods backing statistically the main findings including motives for referrals, referral network composition, the centrality of referees, and referral network building and maintaining in general.

Third, future studies could study referral networks in different geographies, of VCs focusing on different stages, and in other industries comparing them to venture capital. This study only included VCs from London and Helsinki. Also, while this study focused on seed and series A VCs, later-stage VCs would also be an exciting addition in future studies. In addition to examining the developed referral glow generation framework in new contexts, one additional pathway for future research would be to examine the generation of referrals in entirely different industries and compare them to other industries, including venture capital.

Fourth, future studies could examine the potential performance differences between companies sourced from different sources. Few of the interviewees indicated that referred companies had performed better than companies who cold contacted them. Additionally, the performance difference could also be studied at the VC fund level by examining if different referral network characteristics correlate with fund performance.

As a final word, hopefully, this study will be helpful for VCs to both understand the importance of referral networks in venture capital deal sourcing and to pay attention to the most critical factors affecting referral deal flow generation. Referral networks are crucial for VCs who want to be considered as one of the leading investors in the future since the referral network's significance seems only to increase as the venture capital industry matures. Additionally, it is hoped that future researchers find this thesis relevant to their studies.

References

Admati, A. R., & Pfleiderer, P. (1994). Robust financial contracting and the role of venture capitalists. *The Journal of Finance*, *49*(2), 371–402.

Atomico. (2018). *The State of European Tech*. Retrieved from https://2018.stateofeuropeantech.com/

Bachmann, R., & Schindele, I. (2006). *Theft and Syndication in Venture Capital Finance*. Retrieved from http://ssrn.com/abstract=896025

Batjargal, B. (2007). Network Triads: Transitivity, Referral and Venture Capital Decisions in China and Russia. *Journal of International Business Studies*, *38*(6), 998–1012.

Baum, J. A. C., Calabrese, T., & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, *21*(3), 267–294. https://doi.org/10.1002/(SICI)1097-0266(200003)21

Berlin, M. (1998). That Thing Venture Capitalists Do. *Business Review, Federal Reserve Bank of Philadelphia*, *1*, 15–26.

Bothner, M. S., Kim, Y.-K., & Lee, W. (2006). *Primary status, complementary status, and capital acquisition in the U.S. venture capital industry*.

British Business Bank, B. (2019). *UK VC & Female Founders*.

Burt, R. S. (1997). The contingent value of social capital. *Administrative Science Quarterly*, *42*(2), 339–365.

Burt, R. S. (2001). Structure holes versus network closure as social capital. In N. Lin, K. Cook, & R. S. Burt (Eds.), *Social Capital: Theory and Research* (pp. 31–56). New York: Aldine de Gruyter.

Bygrave, W. D. (1987). Syndicated investments by venture capital firms: A networking perspective. *Journal of Business Venturing*, *2*(2), 139–154.

Bygrave, W. D. (1988). The structure of the investment networks of venture capital firms. *Journal of Business Venturing*, *3*(2), 137–157. https://doi.org/10.1016/0883-9026(88)90023-7

CB Insights. (2019). From Alibaba to Zynga: 40 Of The Best VC Bets Of All Time And What We Can Learn From Them. *Research Briefs*. Retrieved from https://www.cbinsights.com/research/best-venture-capital-investments/

Chemmanur, T., Krishnan, K., & Nandy, D. (2011). How Does Venture Capital Financing Improve Efficiency in Private Firms? A Look Beneath the Surface. *The Review of Financial Studies*, *24*(12), 4037–4090.

Chung, S., Singh, H., & Lee, K. (2000). Complementarity, status similarity, and social capital as drivers of alliance formation. *Strategic Management Journal*, *21*(1), 1–22.

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, *94*, 95–120.

Crunchbase. (2018). Venture Program. Retrieved February 19, 2019, from https://about.crunchbase.com/partners/venture-program/

Cumming, D., Fleming, G., & Schwienbacher, A. (2006). Legality and venture capital exits. *Journal of Corporate Finance*, *12*, 214–245. https://doi.org/10.1016/j.jcorpfin.2004.12.004

Das, S., Syiem, B. V., & Kalita, H. K. (2014). Popularity Analysis on Social Network: A Big Data Analysis. *International Journal of Computer Applications*, *975*, 27–31.

Dimov, D., & Milanov, H. (2010). The interplay of need and opportunity in venture capital investment syndication. *Journal of Business Venturing*, *25*(4), 331–348. https://doi.org/10.1016/j.jbusvent.2009.01.002

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, *14*(4), 532–550.

Elango, B., Fried, V. H., Hisrich, R. D., & Polonchek, A. (1995). How venture capital firms differ. *Journal of Business Venturing*, *10*(94), 157–179.

Eriksson, P., & Kovalainen, A. (2016). *Qualitative methods in business research: A practical guide to social research* (2nd ed.). London: Sage Publications.

Ewens, M., & Rhodes-Kropf, M. (2015). Is a VC partnership greater than the sum of its partners? *The Journal of Finance*, *70*(3), 1081–1113.

Ferrary, M. (2003). The Gift Exchange in the Social Networks of Silicon Valley. *California Management Review*, *45*(4).

Ferrary, M. (2010). Syndication of venture capital investment: the art of resource pooling. *Entrepreneurship Theory and Practice*, *34*, 885–907. https://doi.org/10.1111/j.1540-6520.2009.00356.x

Fiet, J. O. (1995). Reliance upon informants in the venture capital industry. *Journal of Business Venturing*, *10*, 195–223.

First Round. (2015). 10 Year Project. Retrieved February 19, 2019, from http://10years.firstround.com/

Flaherty, J. (2018). How to Write Better Cold Emails to VCs. Retrieved February 19, 2019, from https://hackernoon.com/how-to-write-better-cold-emails-to-vcs-bd20d3020470

Fliaster, A., & Spiess, J. (2008). Knowledge mobilization through social ties: The cost-benefit analysis. *Schmalenbach Business Review*, *60*(1), 99–117.

Flick, U. (2009). *An introduction to qualitative research* (4th ed.). Sage Publications.

Fund, B. R., Pollock, T. G., Baker, T., & Wowak, A. J. (2008). Who's the new kid? The process of developing centrality in venture capitalist deal networks. In J. A. C. Baum & T. J. Rowley (Eds.), *Network Strategy (Advances in Strategic Management - Volume 25)* (pp. 563–593). Emerald Group Publishing Limited.

Ghorpade, S. (2018). How Softbank's Vision Fund Is Disrupting The Venture Capital Business. Retrieved February 21, 2019, from https://inc42.com/resources/how-softbanks-vision-fund-is-disrupting-the-venture-capital-business/

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*, 15–31. https://doi.org/10.1177/1094428112452151

Gompers, P. (1996). Grandstanding in the venture capital industry. *Journal of Financial Economics*, *42*(1), 133–156.

Gompers, P., Gornall, W., Kaplan, S. N., & Strebulaev, I. A. (2016). *How do venture capitalists make decisions?*

Gompers, P., & Lerner, J. (1999). *What drives venture capital fundraising?* (No. 6906). *National Bureau of Economic Research*.

Gompers, P., & Lerner, J. (2001). The Venture Capital Revolution. *Journal of Economic Perspectives*, *15*(2), 145–168. https://doi.org/10.1257/jep.15.2.145

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, *25*, 161–178.

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, *78*(6), 1360–1380.

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, *91*(3).

Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal*, *38*(1), 85–112.

Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, *19*(4), 293–317.

Gulati, R., & Gargiulo, M. (1999). Where do interorganizational networks come from? *American*

Journal of Sociology, *104*(5), 1439–1493.

Harrison, R. T., & Mason, C. M. (2000). Venture capital market complementarities: The links between business angels and venture capital funds in the United Kingdom. *Venture Capital*, *2*(3), 223–242. https://doi.org/10.1080/13691060050135091

Hart, O., & Holmstrom, B. (1986). *The theory of contracts*.

Hellmann, T. (2002). A theory of strategic venture investing. *Journal of Financial Economics*, *64*, 285–314.

Heuven, J., & Groen, A. (2012). The role of social networks in financing technology-based ventures : an empirical exploration. *Venture Capital*, *14*(2–3), 131–149.

Hochberg, Y., Ljungqvist, A., & Lu, Y. (2007). Whom You Know Matters: Venture Capital Networks and Investment Performance. *The Journal of Finance*, *62*(1), 251–301.

Hochberg, Y., Ljungqvist, A., & Lu, Y. (2010). Networking as a barrier to entry and the competitive supply of venture capital. *The Journal of Finance*, *65*(3), 829–859.

Hsu, D. H. (2004). What do entrepreneurs pay for venture capital affiliation. *The Journal of Finance*, *59*(4), 1805–1844.

Hsu, D. H. (2007). Experienced entrepreneurial founders, organizational capital, and venture capital funding. *Research Policy*, *36*(5), 722–741. https://doi.org/10.1016/j.respol.2007.02.022

Jääskeläinen, M. (2012). Venture capital syndication: Synthesis and future directions. *International Journal of Management Reviews*, *14*(4), 444–463. https://doi.org/10.1111/j.1468-2370.2011.00325.x

Jääskeläinen, M., & Milanov, H. (2011). How much do they make by just standing there? Deal flow allocation as a structural determinant of VC performance. *Frontiers of Entrepreneurship Research*, *31*(2), 19–33.

Jenssen, J. I. (2001). Social networks, resources and entrepreneurship. *Entrepreneurship and Innovation*, *2*(2), 103–109. https://doi.org/10.5367/000000001101298846

Kameda, T., Ohtsubo, Y., & Takezawa, M. (1997). Centrality in sociocognitive networks and social influence: an illustration in a group decision-making context. *Journal of Personality and Social Psychology*, *73*(2), 296–309.

Kane, N. (2014). What Is An Entrepreneur-In-Residence? Retrieved February 19, 2019, from https://www.forbes.com/sites/neilkane/2014/09/09/what-is-an-entrepreneur-in-residence/

Koka, B. R., Madhavan, R., & Prescott, J. E. (2006). The evolution of interfirm networks:

Environmental effects on patterns of network change. *Academy of Management Review*, *31*(3), 721–737.

Konrad, A. (2017). Midas 2017: Meet The 100 Best Venture Capitalists In The World. Retrieved February 19, 2019, from https://www.forbes.com/sites/alexkonrad/2017/04/18/midas-2017-worlds-best-venture-capitalists/#548b1f24020f

Krackhardt, D. (1990). Assessing the political landscape: Structure, cognition, and power in organizations. *Administrative Science Quarterly*, *35*, 342–369.

Kreps, D. M. (1990). Game Theory and Economic Modelling. *Oxford University Press*.

Lerner, J. (1994). The syndication of venture capital investments. *Financial Management*, *23*(3), 16–27.

Lowercase Capital. (2017). How To Saddle Up With Us. Retrieved February 19, 2019, from https://web.archive.org/web/20170708223007/https://lowercasecapital.com/prospecting/

Manigart, S., Lockett, A., Meuleman, M., Wright, M., Landström, H., Bruining, H., … Hommel, U. (2006). Venture capitalists' secision to syndicate. *Entrepreneurship Theory and Practice*, *30*, 131–153.

Martinez, R. (2015). 9 Tips to Cold-Call VCs Like a Pro. Retrieved February 19, 2019, from https://medium.com/point-nine-news/9-tips-to-cold-call-vcs-like-a-pro-ffa58f5edd8c

Maula, M. V. J. (2001). *Corporate venture capital and the value-added for technology-based new firms*. Helsinki University of Technology.

Metrick, A., & Yasuda, A. (2010). *Venture capital and other private equity: a survey*.

NVCA. (2018). *National Venture Capital Association Yearbook*.

O'Hear, S. (2017). After leaving Accel, Fred Destin is raising seed fund with Twenty Minute VC host Harry Stebbings. Retrieved February 19, 2019, from https://techcrunch.com/2017/05/09/after-leaving-accel-fred-destin-is-raising-seed-fund-with-twenty-minute-vc-host-harry-stebbings/

Ozcan, P., & Eisenhardt, K. M. (2009). Origin of alliance portfolios: entrepreneurs, network strategies, and firm performance. *Academy of Management Journal*, *52*(2), 246–279.

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health*, *42*(5), 533–544. https://doi.org/10.1007/s10488-013-0528-y.Purposeful

Park, S. (2017). 10 Things VCs Absolutely Hate About Your Pitch Email. Retrieved February 19, 2019, from https://hackernoon.com/10-things-vcs-absolutely-hate-about-your-pitch-email-d74cdf37b9ad

Petty, J. S., & Gruber, M. (2011). “In pursuit of the real deal”. A longitudinal study of VC decision making. *Journal of Business Venturing*. https://doi.org/10.1016/j.jbusvent.2009.07.002

Pfeffer, J. (1992). Understanding Power in Organizations. *California Management Review*, *34*(2), 29–50.

PitchBook. (2019). Why do the world’s smartest investors, companies and advisors use the PitchBook Platform? Retrieved February 19, 2019, from https://pitchbook.com/client-testimonials

Podolny, J. M. (1993). A status-based competition model of market. *American Journal of Sociology*, *98*(4), 829–872.

Reuber, R. A., & Fischer, E. (2005). The company you keep: How young firms in different competitive contexts signal reputation through their customers. *Entrepreneurship Theory and Practice*, *29*(1), 57–78.

Roberts, E. B. (1991). High Stakes for High-Tech Entrepreneurs: Understanding Venture Capital Decision Making. *Sloan Management Review*, *2*(32), 9–20.

Rothaermel, F. T. (2001). Complementary assets, strategic alliances, and the incumbent’s advantage: an empirical study of industry and firm effects in the biopharmaceutical industry. *Research Policy*, *30*, 1235–1251. https://doi.org/10.1016/S0048-7333(00)00142-6

Rowley, T., Behrens, D., & Krackhardt, D. (2000). Redundant governance structures: An analysis of relational and structural embeddedness in the steel and semiconductor industries. *Strategic Management Journal*, *21*(3), 369–386.

Sahlman, W. A. (1990). The structure and sovernance of venture-capital organizations. *Journal of Financial Economics*, *27*(2), 473–521. https://doi.org/10.1016/0304-405x(90)90065-8

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Harlow: Pearson Education.

Selznick, P. (1948). Foundations of the theory of organization. *American Sociological Review*, *13*(1), 25–35.

Shane, S., & Cable, D. (2002). Network Ties, Reputation, and the Financing of New Ventures. *Management Science*, *48*(3), 364–381. https://doi.org/10.1287/mnsc.48.3.364.7731

Shane, S., & Stuart, T. (2002). Organizational endowments and the performance of university start-ups. *Management Science*, *48*(1), 154–170.

Sorensen, M. (2007). How Smart Is Smart Money? A Two-Sided Matching Model of Venture Capital. *The Journal of Finance*, *62*(6), 2725–2762. Retrieved from https://www.jstor.org/stable/4622352

Sorenson, O., & Stuart, T. (2001). Syndication networks and the spatial distribution of venture capital investments. *American Journal of Sociology*, *106*(6). https://doi.org/10.2139/ssrn.220451

Sorenson, O., & Stuart, T. E. (2008). Bringing the context back in: settings and the search for syndicate partners in venture capital investment networks. *Administrative Science Quarterly*, *53*, 266–294.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Stuart, T. E., Hoang, H., & Hybels, R. C. (1999). Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative Science Quarterly*, *44*(2), 315–349.

Teten, D. (2014). Where Are The Deals? How VCs Identify The Next Generation Of Startups. Retrieved February 19, 2019, from https://www.forbes.com/sites/davidteten/2014/02/03/where-are-the-deals-how-vcs-identify-the-next-generation-of-startups/#6b797d492b85

Tyebjee, T. T., & Bruno, A. V. (1984). A Model of Venture Capitalist Investment Activity. *Management Science*, *30*(9), 1051–1066. https://doi.org/10.1287/mnsc.30.9.1051

Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, *61*(4), 674–698.

Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, *42*, 35–67.

Wasserman, S., & Faust, K. (1999). *Social network analysis: Methods and applications*. New York: Cambridge University Press.

Welch, C., Piekkari, R., Plakoyiannaki, E., & Paavilainen-Mäntymäki, E. (2011). Theorising from case studies: Towards a pluralist future for international business research. *Journal of International Business Studies*, *42*, 740–762. https://doi.org/10.1057/jibs.2010.55

Wright, M., & Robbie, K. (1998). Venture Capital and Private Equity: A Review and Synthesis. *Journal of Business Finance & Accounting*, *25*(5&6), 521–570. https://doi.org/10.1111/1468-5957.00201

Yang, B. (2018). How to Attract (and Scale) Deal Flow. Retrieved February 19, 2019, from https://500.co/attract-scaledeal-flow/

Yin, R. K. (2003). *Case study research and applications: Design and methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Zhang, Y., & Wildemuth, B. M. (2009). Qualitative analysis of content. In B. M. Wildemuth (Ed.), *Applications of Social Research Methods to Questions in Information and Library Science* (pp. 308–319). Westport, CT: Libraries Unlimited.

Appendix A: Interview Guide

Introduction to deal flow

On a scale from 1 to 10 how hard is deal sourcing for you? 10 being really hard.

Do you spend time ensuring that you get good deal flow? If yes, what do you do and how much time do you spend?

How would you describe your network?

You have several partners in the fund, how overlapping are your networks?

VC deal flow in numbers

Your latest investments are: (select 5-10 latest). How did these companies end up in your deal flow funnel?

Who made the initial contact: you, the company or a third person (who)?

From all the cases you see, approximately how many (%) are referred, how many cold contacts, and how many are a result of your outbound?

From your investments approximately how many (%) were originally referred, how many were cold contacts, and how many were a result of your outbound?

How would you rank the performance of originally referred vs. originally cold contacts vs. originally outbound in your portfolio?

Most important deal flow sources and contacts

What do you think are your most important deal flow sources?

Are there some good deal flow sources that you get but that you just have not yet invested in?

How important are referrals as a deal flow source to you?

Who are your most relevant contacts in terms of deal flow?

How many companies do they refer to you yearly?

How partner specific are these contacts?

How large is the pool of people who actively refer cases to you (at least twice a year)?

Maintaining and developing relationships with most important deal flow contacts

Can you elaborate on your relationship with your most important deal flow contacts?

How did you get to know the people?

When did they start to refer companies to you?

Do you return the favor for them somehow?

How do you nurture the relationship with them?

Are you actively developing your referral network? If yes, how?

How you noticed some good ways of creating new deal flow contacts?

Does the referring person typically invest also, or do they have a vested interest in the company?

If a company is referred to you, is it also referred to other investors typically?

Deal sourcing development

How do you improve your deal flow?

Are there some ways you use to get a proprietary deal flow that you have not mentioned yet?

Do you try to improve more your network or brand?

What are the biggest challenges in deal sourcing for you?

Are there some aspects of referral networks that are important to understand but we have not yet talked about?